

Antarctic Meteorite NEWSLETTER

A periodical issued by the Antarctic Meteorite Working Group to inform scientists of the basic characteristics of specimens recovered in the Antarctic.

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!!!!!!! SAMPLE REQUEST DEADLINE: OCTOBER 20, 1986 (SEE PAGE 2) !!!!!!!!

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SAMPLE-REQUEST GUIDELINES

All sample requests should be made in writing to

Secretary, MWG
SN2/Planetary Materials Branch
NASA/Johnson Space Center
Houston, TX 77058 USA.

Questions pertaining to sample requests can be directed in writing to the above address or can be directed by telephone to (713) 483-3274.

Requests for samples are welcomed from research scientists of all countries, regardless of their current state of funding for meteorite studies. All sample requests will be reviewed by the Meteorite Working Group (MWG), a peer-review committee that guides the collection, curation, allocation, and distribution of the U. S. Antarctic meteorites. Issuance of samples does not imply a commitment by any agency to fund the proposed research. Requests for financial support must be submitted separately to the appropriate funding agencies. As a matter of policy, U. S. Antarctic meteorites are the property of the National Science Foundation and all allocations are subject to recall.

Each request should refer to meteorite samples by their respective identification numbers and should provide detailed scientific justification for the proposed research. Specific requirements for samples, such as sizes or weights, particular locations (if applicable) within individual specimens, or special handling or shipping procedures should be explained in each request. All necessary information should probably be condensable into a one- or two-page letter, although informative attachments (reprints of publications that explain rationale, flow diagrams for analyses, etc.) are welcome.

Requests that are received by the MWG Secretary before October 20, 1986 will be reviewed at the MWG meeting of October 23-25, 1986 to be held in Washington, DC. Requests that are received after the October 20 deadline may possibly be delayed for review until the MWG meets again in the spring of 1987. PLEASE SUBMIT YOUR REQUESTS ON TIME.

Samples can be requested from any meteorite that has been made available through announcement in any issue of the Antarctic Meteorite Newsletter (beginning with 1(1) in June, 1978). Many of the meteorites have also been described in the following catalogs:

Marvin, U. B. and B. Mason (eds.) (1984) Field and Laboratory Investigations of Meteorites from Victoria Land, Antarctica, Smithsonian Contr. Earth Sci. No. 26, Smithsonian Institution Press, 134 pp.

Marvin, U. B. and B. Mason (eds.) (1982) Catalog of Meteorites from Victoria Land, Antarctica, 1978-1980, Smithsonian Contr. Earth Sci. No. 24, Smithsonian Institution Press, 97 pp.

Marvin, U. B. and B. Mason (eds.) (1980) Catalog of Antarctic Meteorites, 1977-1978, Smithsonian Contr. Earth Sci. No. 23, Smithsonian Institution Press, 50 pp.

EDITOR'S OVERVIEW

James L. Gooding

AN UNUSUALLY LARGE CHONDRITE

Because of its size, Antarctic meteorite specimen, LEW85320 (H5 chondrite; p. 22-23), offers an opportunity for studies of meteorite properties that might vary with depth in a large specimen. In particular, an obvious possible use of this specimen is documented sampling as a function of depth for studies of cosmogenic nuclides. Curation and processing of LEW85320 at JSC has been deliberately limited to drying and storage under dynamic flow of high-purity nitrogen gas, with only conservative sampling. Except for removal of surficial salt (and soil?) samples and extraction of a single small chip for classification work, the specimen has been maintained intact.

It has been suggested that LEW85320 should be used as a museum display specimen. Alternatively, it has been suggested that the specimen be systematically dissected in support of various scientific studies. Researchers interested in LEW85320 should formulate their suggestions and plans for use of this specimen and submit them in writing to the Secretary/Meteorite Working Group at the address given on page 2. Remember that letters must be received by October 20, 1986 in order to be assured of review by MWG at the October 23-25, 1986 meeting.

DON'T FORGET TO READ ISSUES 9(2) AND 9(4) !

Issue 9(2) was published in June 1986 and contained descriptions of several newly classified meteorite specimens that should be of great interest to researchers. Before finalizing plans for sample requests, readers should remember to review the contents of issue 9(2).

Issue 9(4) (September 1986), which was co-mailed with the current issue, consists of a comprehensive listing of all specimens from the U. S. Antarctic meteorite collections that have been classified to date. The first version of that compilation was published in issue 8(2) (August 1985). The comprehensive listing in issue 9(4) is intended to be a stand-alone reference document that will serve as a quick guide to basic physical and classification data for the collections. We intend to update and distribute the list periodically as a separate issue of the Antarctic Meteorite Newsletter.

NEW METEORITES FROM 1983-1985 COLLECTIONS

Pages 6-23 contain preliminary descriptions and classifications of meteorites that were completed since publication of issue 9(2) (June 1986). Most large (> 150-g) specimens (regardless of petrologic type) and all "pebble"-sized (< 150-g) specimens of special petrologic type (carbonaceous chondrite, unequilibrated ordinary chondrite, achondrite, etc.) are represented by separate descriptions. However, some specimens of non-special petrologic type (i.e., equilibrated ordinary chondrite) are listed only as single-line entries in Table 1. For convenience, new specimens are also recast by petrologic type in Table 2.

Each "macroscopic" description summarizes features that were visible to the eye (with, at most, the aid of a binocular stereomicroscope) at the time the meteorite was first examined. Macroscopic descriptions of stony meteorites were performed at NASA/JSC. Each "thin section" description represents features that were found in a survey-level examination of a polished section that was prepared from a small (usually exterior) chip of the meteorite. Classification is based on microscopic petrography and reconnaissance-level electron-probe microanalyses. For each stony meteorite, the sample number assigned to the preliminary examination section (...1 or ...3, etc.) is included as an aid to workers who may later wish to intercompare samples from different locations in the meteorite. Exceptions to that rule occur for descriptions of several specimens that are thought to be members of a single fall. In those cases, a single microscopic description was based on several different thin sections.

Meteorite descriptions contained in this issue were contributed by the following individuals:

Mrs. Carol Schwarz, Ms. Roberta Score, and Mr. Rene' Martinez
Planetary Materials Laboratory
(NASA/Johnson Space Center)
Northrop Services, Inc.
Houston, Texas

Dr. Brian H. Mason
Department of Mineral Sciences
U. S. National Museum of Natural History
Smithsonian Institution
Washington, DC

Dr. James L. Gooding
Planetary Materials Branch
NASA/Johnson Space Center
Houston, Texas.

TENTATIVE PAIRINGS FOR NEW SPECIMENS

Table 3 summarizes possible pairings of new specimens with each other and with previously classified specimens, based on descriptive data provided in this newsletter issue. Readers who desire a more comprehensive review of meteorite pairings in the U. S. Antarctic collection should refer to the compilation provided by Dr. E. R. D. Scott, as published in issue 2(2) (June 1986).

METEORITE POWDERS PREPARED BY EUGENE JAROSEWICH

It is well known that, because many meteorites are compositionally heterogeneous at the millimeter to centimeter scale, representative sampling can be a significant problem in studies of the bulk compositions of meteorites. Especially for chemical and elemental measurements, it is advantageous to have all analyses performed on equivalent splits from a representative, homogenized powder so that meaningful intercomparison of data can be achieved.

Thanks to the generous cooperation and hard work of Eugene Jarosewich (Department of Mineral Sciences, U. S. National Museum of Natural History, Smithsonian Institution, Washington, DC), homogeneous-powder samples are available for many of the more interesting specimens from the U. S. Antarctic collection. A complete list of those powders is given in Table 4. For each specimen, the weight of the sample that was committed to homogenization is listed. The amount of material that remains from each sample varies from one specimen to the next because some material has been consumed in analyses by various investigators. However, these powders probably comprise the most representative bulk samples of the respective meteorites that can be obtained, especially for analyses that require only a few tens to a few hundreds of milligrams of material.

For each meteorite that contained a significant amount of metal, quantitative separations were made to produce metal and silicate (+ sulfide) portions by crushing and sieving. Large grains of metal were concentrated into the ">100-mesh" fraction. The "<100-mesh" fraction was predominantly silicate (+ sulfide and minor metal) material. For each meteorite that did not contain appreciable metal, though, no such splitting was attempted (e.g., eucrites, C2 chondrites).

Further details of sample preparation can be obtained directly from Eugene Jarosewich (details are provided along with allocated samples). However, requests for samples should be made through the Secretary/MWG at the address given on page 2 of this newsletter.

Table 1.

List of Newly Classified Antarctic Meteorites **

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALH 83046	32.9	H-5 CHONDRITE	A/B	A	17	15
ALH 83047	20.0	H-5 CHONDRITE	B/C	A	19	16
ALH 83048	2.3	L-5 CHONDRITE	B/C	A	24	20
ALH 83049	6.1	H-5 CHONDRITE	B	B	18	16
ALH 83050	9.7	H-6 CHONDRITE	A/B	B	17	15
ALH 83051	16.5	H-5 CHONDRITE	A/B	A	17	15
ALH 83052	52.8	L-6 CHONDRITE	C	B	23	20
ALH 83053	63.2	H-5 CHONDRITE	C	C	17	15
EET 83363	184.7	L-6 CHONDRITE	B	A/B	24	20
EET 83364	204.9	L-6 CHONDRITE	A/B	A	24	20
ALH 84073	630.6	H-5 CHONDRITE	B	A	17	15
ALH 84074	757.5	H-5 CHONDRITE	A/B	B	17	15
ALH 84075	788.6	H-5 CHONDRITE	C	B/C	17	15
ALH 84076	368.7	H-5 CHONDRITE	B/C	A	18	16
ALH 84077	276.4	H-5 CHONDRITE	B	A	18	16
ALH 84078	283.3	H-5 CHONDRITE	B/C	A	18	16
ALH 84079	749.6	L-6 CHONDRITE	A/B	A	23	20
ALH 84080	286.8	L-6 CHONDRITE	B	A	24	20
ALH 84081	612.3	LL-6 CHONDRITE	A	B	29	23
ALH 84082	556.6	H-6 CHONDRITE	C	A	19	17
ALH 84083	419.7	H-6 CHONDRITE	B/C	B/C	18	16
ALH 84084	331.8	H-4 CHONDRITE	B	A	18	16
ALH 84085	554.2	H-5 CHONDRITE	B/C	B/C	17	15
ALH 84086	234.0	LL-3 CHONDRITE	A/B	A	25-29	17-26
ALH 84087	314.6	L-6 CHONDRITE	A/B	A	24	20
ALH 84088	297.5	H-5 CHONDRITE	B	A	18	16
ALH 84089	303.8	H-5 CHONDRITE	B/C	A	18	16
ALH 84090	201.8	L-6 CHONDRITE	C	A	25	22
ALH 84091	214.6	H-5 CHONDRITE	B/C	A	19	17
ALH 84092	213.9	L-6 CHONDRITE	A/B	B	23	20
ALH 84093	113.5	H-6 CHONDRITE	B	B	17	15
ALH 84094	207.6	H-5 CHONDRITE	C	B	17	15
ALH 84095	276.8	L-6 CHONDRITE	A/B	A	24	20
ALH 84096	293.6	CARBONACEOUS C4	A/B	A	30	22
ALH 84097	388.7	L-6 CHONDRITE	B	A	24	21
ALH 84098	260.5	H-5 CHONDRITE	B/C	A	17	15
ALH 84099	150.3	H-5 CHONDRITE	B/C	B	17	15
ALH 84100	110.3	H-5 CHONDRITE	B	A	18	16
ALH 84107	134.1	LL-6 CHONDRITE	A	B	29	23
ALH 84111	131.5	H-5 CHONDRITE	B	A/B	18	16
ALH 84116	56.2	LL-6 CHONDRITE	B	A	28	23
ALH 84117	71.8	H-5 CHONDRITE	B	A	18	16
ALH 84119	33.8	LL-6 CHONDRITE	A	A	28	23
ALH 84126	41.2	LL-3 CHONDRITE	B	B	7-31	3-24
ALH 84131	107.9	H-5 CHONDRITE	C	B/C	18	15

Table 1. (cont.)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALH 84135	31.3	H-5 CHONDRITE	B/C	A	18	16
ALH 84136	83.5	UREILITE	B	A/B	0-5	4
ALH 84137	145.4	H-5 CHONDRITE	B/C	C	18	16
ALH 84138	20.2	H-5 CHONDRITE	B	A	19	17
ALH 84139	157.1	H-5 CHONDRITE	A	A	19	17
ALH 84147	54.2	H-6 CHONDRITE	C	A	17	15
ALH 84151	112.4	H-6 CHONDRITE	B	A	18	15
ALH 84153	242.9	H-6 CHONDRITE	B/C	A	17	15
ALH 84157	88.6	H-5 CHONDRITE	B/C	A	17	15
ALH 84167	150.7	H-5 CHONDRITE	C	B	17	15
ALH 84168	14.2	LL-6 CHONDRITE	B	A	30	24
ALH 84170	39.2	E-3 CHONDRITE	B	A	0.6-28	0.9-17
ALH 84177	7.3	L-5 CHONDRITE	B	B	24	20
ALH 84178	0.4	H-5 CHONDRITE	B	A	18	16
ALH 84184	42.1	H-5 CHONDRITE	B	B	18	16
ALH 84185	4.8	H-5 CHONDRITE	C	A	18	16
ALH 84188	3.1	E-4 CHONDRITE	C	B		0.7-3
ALH 84191	14.0	CARBONACEOUS C2	A	B	0.4-.8	0.8-7
ALH 84198	5.4	LL-6 CHONDRITE	A/B	A	29	24
ALH 84206	15.1	E-4 CHONDRITE	A/B	A		0.7-6
ALH 84216	5.5	H-5 CHONDRITE	B/C	A/B	18	16
ALH 84227	12.1	H-5 CHONDRITE	C	B/C	18	16
ALH 84230	2.4	H-4 CHONDRITE	B	A	18	14-19
ALH 84236	32.3	H-5 CHONDRITE	B	B	18	16
ALH 84245	18.9	H-5 CHONDRITE	B	A	17	15
ALH 84250	10.0	E-4 CHONDRITE	B	A		0.5-4
ALH 84252	3.1	H-6 CHONDRITE	B/C	A	18	16
ALH 84254	2.0	E-4 CHONDRITE	B	A		0.3-4
ALH 84255	11.3	LL-6 CHONDRITE	A	A	28	24
ALH 84262	15.3	H-6 CHONDRITE	C	B	17	15
ALH 84264	137.6	L-6 CHONDRITE	A	A	24	21
EET 84301	75.1	L-6 CHONDRITE	B	B	24	20
EET 84302	59.6	ACHONDRITE	B/C	B	5	8
EET 84303	57.5	H-5 CHONDRITE	C	A	18	16
EET 84304	152.2	L-6 CHONDRITE	B	A	24	20
EET 84305	9.8	LL-6 CHONDRITE	A/B	B	27	22
EET 84306	3.5	H-6 CHONDRITE	C	A/B	19	16
EET 84307	5.1	L-6 CHONDRITE	C	A	23	20
EET 84308	9.3	L-6 CHONDRITE	B	A	24	20
ALH 85001	212.3	EUCRITE	A/B	A/B		32
ALH 85002	437.7	CARBONACEOUS C4	A	A	30	26
ALH 85005	18.9	CARBONACEOUS C2	A	A	0.5-39	.9-2.2
ALH 85006	49.0	CARBONACEOUS C3V	A	A	0.3-43	.9-4.9
ALH 85007	82.0	CARBONACEOUS C2	B	B	0.3-30	
ALH 85008	32.1	CARBONACEOUS C2	B	A/B	0.3-45	.9-2.5
ALH 85009	46.6	CARBONACEOUS C2	A	B	0.4-59	.8-1.6
ALH 85013	130.4	CARBONACEOUS C2	A	A/B	0.5-36	
ALH 85014	75.0	L-6 CHONDRITE	A	A	25	21
ALH 85015	3.2	DIOGENITE	A	A	39	25

Table 1. (cont.)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
DOM 85500	59.8	H-5 CHONDRITE	B	A/B	18	16
GRO 85200	3821.6	H-5 CHONDRITE	B/C	A	18	16
GRO 85202	27.2	CARBONACEOUS C2	A/B	C	.8-1.2	
LEW 85300	210.3	EUCRITE	A/B	A		32-63
LEW 85302	114.5	EUCRITE	A/B	A/B		24-59
LEW 85303	408.0	EUCRITE	A/B	A		30-62
LEW 85305	40.8	EUCRITE	A	A		31-57
LEW 85306	6.5	CARBONACEOUS C2	A	A	0.2-33	.7-5.5
LEW 85309	54.1	CARBONACEOUS C2	A/B	B/C	0.2-41	.9-1.5
LEW 85311	199.5	CARBONACEOUS C2	B	B/C	0.4-36	.9-1.1
LEW 85312	31.7	CARBONACEOUS C2	B	B/C	0.2-45	.7-1.8
LEW 85313	191.2	DIOGENITE	B	B		28-35
LEW 85317	8.7	L-4 CHONDRITE	A/B	A	25	18-22
LEW 85320	110224.0	H-5 CHONDRITE	B	B	19	16

Table 2.

Newly Classified Specimens Listed By Type **

Achondrites

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
EET 84302	59.6	ACHONDRITE	B/C	B	5	8
ALH 85015	3.2	DIOGENITE	A	A	39	25
LEW 85313	191.2	DIOGENITE	B	B		28-35
ALH 85001	212.3	EUCRITE	A/B	A/B		32
LEW 85300	210.3	EUCRITE	A/B	A		32-63
LEW 85302	114.5	EUCRITE	A/B	A/B		24-59
LEW 85303	408.0	EUCRITE	A/B	A		30-62
LEW 85305	40.8	EUCRITE	A	A		31-57
ALH 84136	83.5	UREILITE	B	A/B	0-5	4

Carbonaceous Chondrites

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALH 84191	14.0	CARBONACEOUS C2	A	B	0.4-.8	0.8-7
ALH 85005	18.9	CARBONACEOUS C2	A	A	0.5-39	.9-2.2
ALH 85007	82.0	CARBONACEOUS C2	B	B	0.3-30	
ALH 85008	32.1	CARBONACEOUS C2	B	A/B	0.3-45	.9-2.5
ALH 85009	46.6	CARBONACEOUS C2	A	B	0.4-59	.8-1.6
ALH 85013	130.4	CARBONACEOUS C2	A	A/B	0.5-36	
GRO 85202	27.2	CARBONACEOUS C2	A/B	C	.8-1.2	
LEW 85306	6.5	CARBONACEOUS C2	A	A	0.2-33	.7-5.5
LEW 85309	54.1	CARBONACEOUS C2	A/B	B/C	0.2-41	.9-1.5
LEW 85311	199.5	CARBONACEOUS C2	B	B/C	0.4-36	.9-1.1
LEW 85312	31.7	CARBONACEOUS C2	B	B/C	0.2-45	.7-1.8
ALH 85006	49.0	CARBONACEOUS C3V	A	A	0.3-43	.9-4.9
ALH 84096	293.6	CARBONACEOUS C4	A/B	A	30	22
ALH 85002	437.7	CARBONACEOUS C4	A	A	30	26

Chondrites - Type 3

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALH 84086	234.0	LL-3 CHONDRITE	A/B	A	25-29	17-26
ALH 84126	41.2	LL-3 CHONDRITE	B	B	7-31	3-24

Table 2 (cont.).

Chondrites - Type 4

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALH 84084	331.8	H-4 CHONDRITE	B	A	18	16
ALH 84230	2.4	H-4 CHONDRITE	B	A	18	14-19
LEW 85317	8.7	L-4 CHONDRITE	A/B	A	25	18-22

E Chondrites

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALH 84170	39.2	E-3 CHONDRITE	B	A	0.6-28	0.9-17
ALH 84188	3.1	E-4 CHONDRITE	C	B		0.7-3
ALH 84206	15.1	E-4 CHONDRITE	A/B	A		0.7-6
ALH 84250	10.0	E-4 CHONDRITE	B	A		0.5-4
ALH 84254	2.0	E-4 CHONDRITE	B	A		0.3-4

** NOTES TO TABLES 1 and 2:

"Weathering" categories:

- A: Minor rustiness; rust haloes on metal particles and rust stains along fractures are minor.
- B: Moderate rustiness; large rust haloes occur on metal particles and rust stains on internal fractures are extensive.
- C: Severe rustiness; metal particles have been mostly stained by rust throughout.

"Fracturing" categories:

- A: Minor cracks; few or no cracks are conspicuous to the naked eye and no cracks penetrate the entire specimen.
- B: Moderate cracks; several cracks extend across exterior surfaces and the specimen can be readily broken along the cracks.
- C: Severe cracks; specimen readily crumbles along cracks that are both extensive and abundant.

TABLE 3.

List of Newly Announced Meteorites that may be Paired.

Ureilite:

ALH84136 with ALH82106, 82130.

Carbonaceous C2:

ALH84191 with ALH84033.

ALH85005, 85007, 85008, 85009, 85013.

LEW85306, 85309, 85311, 85313.

E-4 Chondrite:

ALH84188, 84206, 84250, 84254 with
ALHA81189, 82132.

Sample No.: ALH84086
Weight (g): 234.0
Dimensions (cm): 9 x 5 x 3.5
Meteorite Type: LL3 Chondrite

Location: Allan Hills
Field No.: 1569

Macroscopic Description: Roberta Score

Fusion crust covers most of this chondrite. Abundant inclusions, both chondrules and clasts, are contained in the medium gray-colored matrix. One light-colored clast visible on the exterior is 0.7 x 0.9 cm in dimension. Oxidation is minor.

Thin Section (.3) Description: Brian Mason

The section shows a close-packed aggregate of chondrules, chondrule fragments, and irregular inclusions up to 3 mm across, with a few grains of nickel-iron and sulfide and hardly any matrix. A considerable variety of chondrules is present, the commonest being porphyritic olivine and granular olivine with or without polysynthetically twinned clinopyroxene. Some chondrules have intergranular, transparent pale brown glass; in others the glass is turbid and partly devitrified. Microprobe analyses show a moderate range in the composition of olivine (Fa 25-29), and a wider range in pyroxene (Fs 17-26). This range in composition, and the presence of glass and twinned clinopyroxene, indicates type 3, and the olivine composition is characteristic of the LL group; the meteorite is therefore classified as an LL3 chondrite.

Sample No.: ALH84096
Weight (g): 293.6
Dimensions (cm): 10 x 5 x 4
Meteorite Type: C4 Chondrite

Location: Allan Hills
Field No.: 2515

Macroscopic Description: Carol Schwarz

Thin fusion crust covers 70% of this specimen. Areas devoid of fusion crust are mostly weathered and have a rough texture. Fresher areas are gray in color with some darker gray clasts, white clasts, and metal. The interior is medium gray and has several darker gray clasts. Chipping exposed a metal-rich area of several mm².

Thin Section (.4) Description: Brian Mason

The section has a brecciated appearance, with angular areas up to 5 mm across differing in color from pale gray to dark brown; however, the grain size is fairly uniform throughout. The meteorite appears to consist largely of fine-grained olivine (grain size 0.01-0.1 mm) with a small amount (2-3%) of nickel-iron and sulfide. Chondritic structure is barely perceptible. Microprobe analyses gave the following compositions: olivine, Fa 30; pyroxene, Fs 22; plagioclase, An 10. The meteorite is tentatively classified as a C4 chondrite.

Sample No.: ALH84126
Weight (g): 41.2
Dimensions (cm): 3.5 x 3.5 x 2
Meteorite Type: LL3 Chondrite

Location: Allan Hills
Field No.: 2006

Macroscopic Description: Roberta Score

This fragment retains four small patches of fusion crust. The overall exterior color is brown. Numerous chondrule/inclusions show relief on the surface, giving the exterior a rough texture. Weathering has extended deep into the interior. The less weathered material is medium gray with abundant rounded and irregular shaped inclusions.

Thin Section (.2) Description: Brian Mason

The section shows a close-packed aggregate of chondrules, chondrule fragments, and angular clasts, ranging up to 3 mm across. Many of the chondrules have dark rims. A variety of chondrule types is present, including porphyritic olivine, granular olivine and olivine-pyroxene, and radiating pyroxene. A few grains of nickel-iron and troilite are present. Olivine and pyroxene have variable compositions. Olivine composition ranges Fa 7-31 with a mean of Fa 16 (% mean deviation of FeO is 46). Pyroxene composition ranges Fs 3-24, with a mean of Fs 9 (% mean deviation of FeO is 45). The texture and variable mineral compositions are those of type 3, and the amount of metal suggests LL group, hence the meteorite is tentatively classified as an LL3 chondrite.

Sample No.: ALH84100
Weight (g): 110.3
Dimensions (cm): 7.5 x 3.5 x 3
Meteorite Type: H5 Chondrite with clast

Location: Allan Hills
Field No.: 2800

Macroscopic Description: Roberta Score

Weathered fusion crust covers 60% of this fragment. One striking feature of this stone is the heavily weathered fracture surface which contains a semi-rounded clast, 1.5 x 1.3 x 0.2 cm in dimension. This clast is white to light gray in color and coarse-grained. The interior is moderately weathered (heavy in areas), medium-gray in color, and contains numerous chondrules.

Thin Section (.4; .5) Description: Brian Mason

Portions of the clast in this H5 chondrite are present in two thin sections (84100,4 from 84100,1 and 84100,5 from 84100,2). The clast consists of granular olivine and pyroxene, with a little plagioclase and trace amounts of nickel-iron. Compositions of olivine (Fa 18) and pyroxene (Fs 16) are similar to those in the chondritic part of the meteorite; in addition, one grain of pigeonite (Wo 9 Fs 15) was analysed. Two grains of plagioclase (An 38, 50) were analysed. The olivine is turbid and shows undulose extinction (possible shock effects).

Sample No.: ALH84136
Weight (g): 83.5
Dimensions (cm): 6.5 x 3 x 3.5
Meteorite Type: Ureilite

Location: Allan Hills
Field No.: 1527

Macroscopic Description: Rene' Martinez

Flaky black fusion crust entirely covers this specimen. The interior is dark gray and granular with crystals as large as 2 mm in a red-brown matrix. Stone is very coherent.

Thin Section (.3) Description: Brian Mason

The section shows an aggregate of anhedral to subhedral grains (0.6-2.4 mm across) of olivine and pyroxene, with about 10% of opaque material, in part disseminated throughout and in part concentrated along grain boundaries. Olivine grains are gray from submicroscopic opaque inclusions, whereas pyroxene grains are clear but are extremely fractured. Well-preserved fusion crust is present on one edge. Microprobe analyses give the following compositions: olivine, somewhat variable, Fa 0-5, mean Fa 3; pyroxene, essentially uniform, Wo 5 Fs 4; one grain of endiopside, Wo 34 Fs 2.5, was analysed. The mineralogy and texture are typical of a ureilite; this specimen is so similar in all respects to ALH82106 and 82130 that it can be confidently paired with them.

Sample No.: ALH84170
Weight (g): 39.2
Dimensions (cm): 3.5 x 3 x 2
Meteorite Type: E3 Chondrite

Location: Allan Hills
Field No.: 2535

Macroscopic Description: Roberta Score

Fifty percent of this fragment is covered by extremely weathered brown fusion crust. The exposed interior has a black matrix with numerous white to gray rounded and irregular-shaped inclusions. ALH84170 is a coherent specimen.

Thin Section (.2) Description: Brian Mason

Chondrules are abundant, ranging from 0.3-2.0 mm across; they consist of radiating or granular pyroxene, some with olivine. The matrix is made up of chondrule fragments and mineral grains, with a considerable amount of opaque materials (nickel-iron and sulfides). Weathering is extensive, with brown limonitic staining throughout the section. Microprobe analyses show many grains of olivine and pyroxene close to Mg_2SiO_4 and $MgSiO_3$ in composition, but some contain a considerable amount of iron. The nickel-iron contains 2.2-3.0% Si. The meteorite is an enstatite chondrite, and the unequilibrated compositions of the olivine and pyroxene suggest the E3 classification.

Sample No.: ALH84191
Weight (g): 14.0
Dimensions (cm): 3 x 2.5 x 1
Meteorite Type: C2 Chondrite

Location: Allan Hills
Field No.: 1451

Macroscopic Description: Roberta Score

A fractured, blistered, black fusion crust entirely covers ALH84191. Chipping revealed an interior that is black with many rounded and irregular shaped inclusions. Oxidation is minor.

Thin Section (.2) Description: Brian Mason

The section shows scattered chondrules (up to 0.6 mm across), irregular aggregates, and mineral grains in a black matrix which contains dispersed metal and sulfide grains. There is little or no evidence of terrestrial weathering. Microprobe analyses show olivine as nearly pure Mg_2SiO_4 (FeO 0.4-1.3%) and pyroxene with somewhat greater variation (FeO 0.6-4.5%; CaO 0.4-2.2%). The meteorite is a C2 chondrite, and closely resembles ALH84033 and other meteorites paired with it.

Sample Nos.: ALH84188, 84206,
84250, 84254
Weight (g): 3.1; 15.1; 10.0; 2.0
Dimensions (cm): 1x2x0.7; 2x2x1;
2x2x1; 1.5x1.5x0.4
Meteorite Type: E4 Chondrite

Location: Allan Hills
Field Nos.: 2837; 2686;
2813; 1544

Macroscopic Description: Roberta Score

All four specimens retain some fusion crust (84254 is totally covered with fusion crust). The interiors of 84206 and 84250 are black with inclusions as large as 2 mm in diameter, while the interiors of 84188 and 84254 are black and have a massive texture. Metal is present in 84206 and 84254. 84188 is extensively weathered; the others are minimally to moderately weathered.

Thin Section (ALH84188,2) Description: Brian Mason

Chondrules are relatively abundant, but are small, usually about 0.6 mm in diameter; they consist of fine-grained to coarsely granular pyroxene. The matrix consists largely of chondrule fragments and pyroxene grains, with a moderate amount of nickel-iron and sulfides. The meteorite is considerably weathered, with brown limonitic staining throughout the section. Microprobe analyses show that most of the pyroxene is almost pure $MgSiO_3$, but a few grains show FeO up to 2.7%. The nickel-iron contains 2.5% Si. The meteorite is an enstatite chondrite, and since some of the pyroxene is polysynthetically twinned clinoenstatite, it is classed E4. It closely resembles ALH81189, 82132, 84206, 84250, and 84254, and the possibility of pairing should be considered.

Sample No.: ALH85001
Weight (g): 212.3
Dimensions (cm): 7 x 6 x 3.5
Meteorite Type: Eucrite

Location: Allan Hills
Field No.: 2255

Macroscopic Description: Roberta Score

ALH85001 appears to be an oriented stone covered by a shiny black fusion crust with thick flow lines. Areas devoid of fusion crust have weathered to a brownish-gray color. A discontinuous weathering rind, as thick as 4 mm, was exposed when the stone was chipped. The interior is made up of abundant laths of chalky-looking plagioclase in a light gray matrix. The way this stone has weathered is more typical of the Elephant Moraine eucrites than those found in the Allan Hills.

Thin Section (.4) Description: Brian Mason

The section shows angular fragments of orthopyroxene and plagioclase, up to 2.4 mm across, in a comminuted groundmass of these minerals. Some of the pyroxene has lamellae and blebs of exsolved augite. One large gabbroic clast, 6 mm across with individual grains up to 3 mm, is present. Trace amounts of nickel-iron and troilite are present in the groundmass. Microprobe analyses show that pyroxene compositions are remarkable uniform, Wo 2 Fs 32, with a few more calcic grains, up to Wo 8 (possibly incipient augite exsolution). Plagioclase composition is also fairly uniform, An 92-94. The meteorite is a monomict eucrite with unusually magnesian pyroxene, similar to that in the Binda eucrite.

Sample No.: ALH85002
Weight (g): 437.7
Dimensions (cm): 8 x 7 x 5
Meteorite Type: C4 Chondrite

Location: Allan Hills
Field No.: 2219

Macroscopic Description: Rene' Martinez

Approximately 80% of the exterior is covered with reddish-brown, polygonally fractured fusion crust. The interior is light gray with dark rounded inclusions as large as 1 mm and white irregular-shaped inclusions as large as 3 mm in longest dimension.

Thin Section (.4) Description: Brian Mason

The section consists largely of finely granular olivine (grains ranging up to 0.1 mm), with a little pyroxene, plagioclase, and opaques (largely magnetite). A few chondrules, made up of coarser-grained olivine, are present. The section is rimmed with fusion crust along one edge. Microprobe analyses give the following compositions: olivine, Fa 29; pyroxene, Fs 26; plagioclase, An 54-59. The meteorite is a C4 chondrite and closely resembles ALH82135; the possibility of pairing should be considered.

Sample No.: ALH85005, 85007, 85008, Location: Allan Hills
85009, 85013 Field Nos.: 2268; 2209; 2284;
Weight (g): 18.9; 82.0; 32.1; 2240; 2257
46.6; 130.4
Dimensions (cm): 4x2x3; 5x4x4; 3x3x3.5;
4.5x3x3; 6x5x3.5
Meteorite Type: C2 Chondrite

Macroscopic Description: Rene' Martinez

ALH85013 is completely covered with fusion crust; ALH85005 and 85009 retain some weathered fusion crust. The others have no fusion crust and have a knobby appearance with inclusions protruding from the surface. The interiors appear relatively unweathered, black, fine-grained, and contain irregular white inclusions that are <0.5 mm in longest dimension.

Thin Section (ALH85005,4) Description: Brian Mason

The section consists largely of black opaque matrix, through which are scattered small mineral grains (up to 0.2 mm) and sparse chondrules and chondrule fragments. The chondrules and most of the mineral grains consist of olivine, usually close to Mg_2SiO_4 in composition but with some more iron-rich. Pyroxene is less common, and is close to $MgSiO_3$ in composition. A few grains of calcite were noted. The meteorite is a C2³ chondrite; ALH85007, 85008, 85009, and 85013 are very similar and the possibility of pairing should be considered.

Sample No.: ALH85006 Location: Allan Hills
Weight (g): 49.0 Field No.: 2660
Dimensions (cm): 4 x 3 x 3
Meteorite Type: C3V Chondrite

Macroscopic Description: Rene' Martinez

Fusion crust is present on only one surface of this coherent stone. The interior is made up of chondrules, up to 2 mm in diameter, and irregular white inclusions, up to 3 mm in longest dimension.

Thin Section (.5) Description: Brian Mason

The section shows a variety of chondrules (up to 2.5 mm across), chondrule fragments, and irregular clasts in a dark brown to black matrix. Fine-grained opaques are dispersed throughout the matrix and rim some of the chondrules. The matrix consists largely of fine-grained iron-rich (Fa 45-47) olivine. Olivine in the chondrules and mineral fragments is usually near Mg_2SiO_4 in composition, but more iron-rich grains are also present. Pyroxene is much less abundant than olivine, and is close to $MgSiO_3$ in composition. The meteorite is a C3 chondrite of the Vigarano subtype.

Sample No.: ALH85015
Weight (g): 3.2
Dimensions (cm): 1 x 1 x 1
Meteorite Type: Diogenite

Location: Allan Hills
Field No.: 2281

Macroscopic Description: Roberta Score

Fifty percent of ALH85015 is covered with black fusion crust that is shiny in some areas and dull in other areas. Part of the area devoid of fusion crust is highly polished. A weathering rind extends 2 mm into the interior of the stone. The interior is medium gray in color with white and dark colored clasts.

Thin Section (.2) Description: Brian Mason

The section consists almost entirely of orthopyroxene clasts, up to 3 mm across, in a groundmass of comminuted orthopyroxene, with accessory plagioclase and opaques, and traces of olivine. The pyroxene is fairly uniform in composition, Fs 25, with CaO 0.8-1.5%, MnO 0.45-0.67%, Al_2O_3 0.32-0.66%, TiO_2 0.05-0.17%. Plagioclase composition is An 84-95. One grain of olivine, Fa 39, was analysed. The meteorite is a diogenite.

Sample No.: EET84302
Weight (g): 59.6
Dimensions (cm): 4 x 3 x 2.5 cm
Meteorite Type: Achondrite

Location: Elephant Moraine
Field No.: 2195

Macroscopic Description: Roberta Score

The exterior of this stone is mostly covered with thin fusion crust. Medium-grained pyroxene, plagioclase and some scattered metal comprise the heavily oxidized interior of EET84302.

Thin Section (.3) Description: Brian Mason

The section shows an anhedral granular aggregate (grain size 0.1-0.4 mm), consisting largely of olivine and orthopyroxene, with minor amounts of plagioclase, diopside, nickel-iron, and troilite. Weathering is extensive, with limonitic staining throughout the section. Microprobe analyses gave the following compositions: olivine, Fa 5; orthopyroxene, Wo 2 Fs 8; diopside, Wo 42 Fs 3; plagioclase, An 23. Texturally this meteorite is an achondrite. However, it resembles a silicate inclusion from an iron meteorite; inclusions with similar texture and mineral compositions have been described from several iron meteorites.

Sample No.: GR085202
Weight (g): 27.2
Dimensions (cm): 4 x 3.5 x 3.5
Meteorite Type: C2 Chondrite

Location: Grosvenor Mountains
Field No.: 2053

Macroscopic Description: Rene' Martinez

Thin fractured fusion crust covers two sides of this carbonaceous chondrite. Fusion crust appeared to be the only thing holding the sample together as it was highly fractured and disintegrated when the stone was chipped. The interior is fine-grained with no inclusions visible. Minute evaporite deposit lines some of the interior fractures.

Thin Section (.4) Description: Brian Mason

The section shows a dark brown to black matrix with numerous mineral grains and aggregates and rare small chondrules. Most of the mineral grains and aggregates consist of an isotropic to weakly birefringent serpentine-like mineral. A few grains of olivine near Mg_2SiO_4 in composition were analysed; some grains of calcite were noted. The meteorite is a C2 chondrite.

Sample No.: LEW85300, 85302, 85303
Weight (g): 210.3; 114.5; 408.0
Dimensions (cm): 7x6.5x3.5; 5.5x5x3;
8.5x6x5.5
Meteorite Type: Eucrite

Location: Lewis Cliff
Field Nos.: 2474; 2422; 2488

Macroscopic Description: Roberta Score

Thin, shiny fusion crust with flow marks coats most of the top of LEW85300. The bottom surface has some fusion crust but most of this face is a fracture surface which appears to have been moderately polished. Fusion crust appears as dull patches on 85302 and 85303. Several large semi-rounded polymineralic clasts (as large as 2 x 2 cm in dimension) have sharply defined edges and are set in a black matrix that is made up of minute inclusions.

Cleaving the stones in half revealed an interior that is lighter in color than the exterior. Several different sharply defined clasts, including white, fine-grained clasts and black aphanitic clasts, were exposed. One large interior area shows extensive oxidation.

Thin Section (LEW85300,12; ,13; ,14) Description: James L. Gooding and Brian Mason

,12: A large (6 mm apparent maximum dimension) light-colored clast is enclosed by finer-grained dark matrix. Clast is composed of subhedral clinopyroxene and plagioclase (typical grain size is a few tenths mm) in a groundmass of granular pyroxene. Both clinopyroxene and plagioclase are cloudy and show crenulated and undulatory extinction under crossed polars. Some clinopyroxene crystals show very fine herringbone texture (probably exsolution lamellae). Ilmenite (?) is abundant in the clast and occurs as irregular grains of ~0.01-0.2 mm size. Matrix surrounding clast is a porous, clastic aggregate of pyroxene and plagioclase mineral fragments with characteristic grain sizes of ~0.1-0.2 mm, but with increasingly finer grains between the large grains. Other optical properties of pyroxene and plagioclase are similar to those described for the clast.

,13: Nearly all of exposed area is subophitic basalt that is comparable in grain size to the clast in ,12, but with much better preserved igneous texture. Clinopyroxene has pronounced herringbone texture (more abundant than in ,12) and ilmenite (?) is an accessory phase.

,14: At least two large clasts (~4-5 mm) of subophitic basalt (with ilmenite (??)) float in a finer-grained clastic matrix, as in ,12. At least two irregular grains of Ni-Fe metal (one ~0.015 mm, the other ~0.12 mm) occur, with the larger one being in the matrix and the smaller one in a clast. The most interesting feature of this section is a dark clast (~2-3 mm size) that resembles a fragment of carbonaceous chondrite (possibly C3). Most of this clast consists of an opaque matrix of low reflectivity (resembles reflectivity of magnetite) with a floating framework of cloudy, irregular, polymineralic clasts and isolated single-crystal mineral fragments. Some of the clasts are nearly spherical but resemble "inclusions" more than "chondrules"; olivine might exist in some of them. Both the border of this clast and objects within it are defined by haloes of dispersed, very fine-grained sulfides. One small grain of possible Ni-Fe metal was observed.

Microprobe analyses of the LEW85300,14 section (by B. Mason) show pyroxene compositions clustering around Wo 3 Fs 60 and ranging to Wo 43 Fs 26, with the mean of 15 analyses Wo 12 Fs 52; two grains with composition Wo 3 Fs 33 were found. Plagioclase ranges in composition An 84-93 with a mean of An 89. The dark clast is a fragment of a C3 carbonaceous chondrite, consisting largely of fine-grained olivine, ranging in composition Fa 1-44; one grain of clinoenstatite (Fs 5) and one of spinel (FeO 0.8%) were analysed. The meteorite is a eucrite with a C3 clast.

Sample No.: LEW85305
Weight (g): 40.8
Dimensions (cm): 3 x 3 x 1.5
Meteorite Type: Eucrite

Location: Lewis Cliff
Field No.: 2002

Macroscopic Description: Roberta Score

LEW85305 has a rectangular shape and is completely covered with shiny fusion crust. Flow marks are apparent in the fusion crust. The interior has a granular texture, plagioclase is evenly disseminated throughout the brownish matrix.

Thin Section (.4) Description: Brian Mason

The section shows a granular aggregate of pale brown pyroxene and colorless pyroxene, with accessory opaques; a small amount of an SiO_2 polymorph, probably tridymite, is present. The meteorite is unbrecciated, but the pyroxene grains (and to a lesser extent the plagioclase) are considerably granulated. Microprobe analyses show pyroxene compositions ranging almost continuously from Wo 6 Fs 57 to Wo 37 Fs 31, with fairly uniform En content. Plagioclase composition is An 84-88. The meteorite is an eucrite; it resembles Ibitira in texture and mineral compositions.

Sample No.: LEW85306, 85309,
85311, 85312
Weight (g): 6.5; 54.1; 199.5; 31.7
Dimensions (cm): 2.5x2.5x1.5; 6x3.5x3;
6x5x5 and 5x2x3; 4.5x3x3
Meteorite Type: C2 Chondrite

Location: Lewis Cliff
Field Nos.: 2001; 2047;
3103; 3108

Macroscopic Description: Rene' Martinez

Frothy black fusion crust appears as patches on these stones. The interiors of these fragments have abundant light-colored clasts/chondrules that are set in a black fine-grained matrix. Thin evaporite deposit is present on 85309. Some brownish-red oxidation was noted.

Thin Section (LEW85306,3) Description: Brian Mason

The section shows numerous mineral grains and aggregates and a few small (maximum diameter 0.6 mm) chondrules in a brown to black matrix. Most of the mineral grains are olivine, usually near Mg_2SiO_4 in composition, but some are more iron-rich. Pyroxene is less abundant, and is near MgSiO_3 in composition. The meteorite is a C2 chondrite.

LEW85309, 85311, and 85312 are very similar to LEW85306 in texture and mineral compositions, and the possibility of pairing should be considered.

Sample No.: LEW85313
Weight (g): 191.2
Dimensions (cm): 8 x 5.5 x 4.5
Meteorite Type: Diogenite

Location: Lewis Cliff
Field No.: 2498

Macroscopic Description: Roberta Score

Dull fusion crust covers most of LEW85313 except where large pieces of stone have been plucked out. This feature is abundant and makes this meteorite resemble a piece of Swiss cheese.

A brownish-gray weathering rind extends from less than 1 mm to greater than 1 cm into the interior. The massive gray matrix contains both rounded and irregular inclusions that range in color from white to black. Some oxidation haloes are obvious.

Thin Section (.5) Description: Brian Mason

The section shows orthopyroxene clasts, up to 4 mm across, in a matrix consisting largely of comminuted pyroxene with a small amount of plagioclase. The orthopyroxene clasts show a minor amount of augite exsolution, both blebby and lamellar. Most of the pyroxene has uniform composition, Fs 29, but a few more iron-rich grains were analysed; minor constituents are CaO 0.53-2.7%, MnO 0.64-0.80%, Al₂O₃ 0.24-0.91%, TiO₂ 0.16-0.31%. One grain of diopside, Wo 44 Fs 12, was analysed. Plagioclase composition is An 88-91. Accessory amounts of an SiO₂ polymorph, probably tridymite, were identified. The meteorite is a diogenite.

Sample No.: LEW85320
Weight (g): ~110224
Dimensions (cm): 61 x 48 x 27
Meteorite Type: H5 Chondrite

Location: Lewis Cliff
Field No.: 3164

Macroscopic Description: Roberta Score

Dull thin black fusion crust with abundant oxidation haloes covers this entire oriented specimen. Shallow regmaglypts are present on each surface except for the bottom. Some regmaglypts contained Antarctic soil. This was collected and given split number 2. LEW85320 is moderately fractured and many of these fractures are lined with crusty and powdery evaporite deposit. Seven hundred milligrams was scraped from the surface and given split number 3. A chip for classification purposes was taken from an inconspicuous area and yielded a highly weathered sample. This most likely is not representative of the weathering or condition of the interior of the entire stone.

Thin Section (.4) Description: James L. Gooding and Brian Mason

This section, which represents the outer 1.5 cm of the specimen, displays ordinary chondritic texture with brecciation. The ferromagnesian chondrule population includes all of the common textural types and most chondrules are readily distinguished from the matrix. However, chondrule pyroxenes are not dominantly monoclinic and chondrule mesostases are mostly cryptocrystalline and birefringent. In addition, there were few, if any, signs of primitive rims on chondrules and the chondrite matrix was mostly a translucent to transparent, granular assemblage of olivine and pyroxene.

Brecciation in this particular sample is most conspicuously displayed as a light/dark contrast between the outer (toward fusion crust) and inner halves of the section. The dark area appears to be enriched in fine-grained matrix (possibly including an enrichment in sulfides) relative to the light area. Although the section is stained with Fe-oxide weathering products of Antarctic origin, the light/dark contrast is probably a feature of pre-terrestrial origin.

A preliminary modal analysis (230 points) of the total section gave 85 vol. % silicates, 11% Ni-Fe metal, and 4% sulfides. Electron microprobe analyses (by B. Mason) showed nearly homogeneous olivine (Fa 19) and pyroxene (Fs 16). On the basis of texture and composition, the specimen is classified as an H5 chondrite.

TABLE 4.

Homogenized Powders of Antarctic Meteorites

a) Original weight of the sample in grams

b) Remaining powder after distribution (as of August 1986)

Meteorite	Amount	Type #	Meteorite	Amount	Type #
a) ALHA76004,10 b)	2.015 0.162	LL3	a) ALHA77260,17 b)	3.100 0.504	L3 *
a) ALHA77003,20 b)	4.700 0.987	C30 *	a) ALHA77270,18 b)	20.060 11.988	L6
a) ALHA77005,38 b)	2.310 0.158	Sh *	a) ALHA77271,20 b)	20.230 12.000	H6
a) ALHA77011,11 b)	3.360 0.577	L3 *	a) ALHA77278,23 b)	5.152 1.047	LL3 *
a) ALHA77015,17 b)	3.110 0.280	L3 *	a) ALHA77284,12 b)	21.130 13.263	L6
a) ALHA77155,12 b)	20.190 11.763	L6	a) ALHA77294,26 b)	20.040 12.531	H5
a) ALHA77167,19 b)	3.100 0.519	L3 *	a) ALHA77296,12 b)	20.850 13.750	L6
a) ALHA77214,18 b)	10.700 4.508	L3 *	a) ALHA77297,23 b)	20.200 12.994	L6
a) ALHA77216 b)	19.770 10.845	L3 \$	a) ALHA77299,17 b)	5.122 1.340	H3 *
a) ALHA77219,27 b)	2.000 0.110	Me	a) ALHA77304,23 b)	3.520 0.785	L4 *
a) ALHA77231,25 b)	20.080 11.910	L6	a) ALHA77307,55 b)	3.513 1.420	C3
a) ALHA77249,16 b)	3.000 0.225	L3 *	a) ALHA78078,09 b)	20.060 12.741	L6
a) ALHA77256,33 b)	2.210 0.362	Di *	a) ALHA78106,23 b)	20.150 13.177	L6
a) ALHA77256,96 b)	20.560 20.403	Di	a) ALHA80102,68 b)	4.350 2.072	Eu
a) ALHA77257,44 b)	2.210 0.224	Ur *	a) ALHA81001,12 b)	2.001 1.140	Eu

Table 4 (continued).

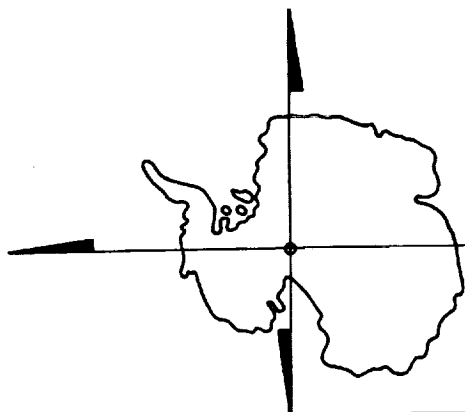
Meteorite	Amount	Type #	Meteorite	Amount	Type #
a) ALHA81006,22	4.010	Eu	a) EETA79004,76	4.090	Eu
b)	1.645		b)	1.605	
a) ALHA81007,09	2.002	Eu	a) EETA79005,69	4.075	Eu
b)	1.348		b)	1.661	
a) ALHA81009,27	4.059	Eu	a) EETA79011,33	2.099	Eu
b)	1.609		b)	1.169	
a) ALHA81010,18	4.040	Eu	a) EET 82600,13	4.092	Ho
b)	1.915		b)	1.929	
a) ALHA81011	4.195	Eu \$	a) EET 83213,38	20.640	L3
b)	1.860		b)	20.508	
a) ALHA81027,17	10.260	L6	a) EET 83232,05	10.030	Eu
b)	8.003		b)	9.773	
a) ALH 82101,16	2.530	C30	a) PCA 82502,32	4.128	Eu
b)	0.372		b)	1.747	
a) ALH 83100,74	20.227	C2	a) PCA 82506,07	20.096	Ur
b)	17.924		b)	17.501	
a) ALH 83102,45	20.011	C2	a) PCA 82507,05	20.200	LL6
b)	19.785		b)	18.067	
a) ALH 84007,32	8.400	Au	a) RKPA80256,07	3.010	L3
b)	7.591		b)	1.153	
a) EETA79001	15.236	Sh \$	a) TIL 82402,05	20.300	LL6
b)	5.888	lith A	b)	18.319	
a) EETA79001	9.437	Sh \$	a) TIL 82403,15	2.000	Eu
b)	3.554	lith B	b)	1.196	

Eugene Jarosewich
Smithsonian Institution

Au = aubrite, Di = diogenite, Eu = eucrite, Ho = Howardite,
Sh = shergottite, Ur = ureilite; others are chondrites

\$ ALHA77216 is a pool of samples ,7 ,10 ,26 and ,32.
ALHA81011 is a pool of samples ,28 ,30 and ,31.
EETA79001 lith A is a pool of samples ,23 ,24 and ,35.
EETA79001 lith B is a pool of samples ,37 and ,46.

All meteorites were prepared in a agate mortar, except for those marked
with asterisk "*" which were prepared in a tungsten carbide mortar.



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INDEX OF CLASSIFIED METEORITES

from the 1976 - 1985 Antarctic Collections

(as of September, 1986)

EDITOR'S OVERVIEW

James L. Gooding

As the number of collected and classified Antarctic meteorites continues to grow, published descriptions of the collection rapidly become obsolete. The Antarctic Meteorite Newsletter (AMN) provides regular listings of newly classified meteorites. In addition, the Smithsonian Institution, through special issues of Smithsonian Contributions to the Earth Sciences, provides more formal summaries of the U. S. Antarctic meteorite expeditions and specimens, along with brief reviews of scientific results. However, there has remained a need for a single, compact reference index to the accumulated classification and description data. The staff of AMN first produced such an index as Tables 2 and 3 in AMN, 8(2) (August 1985). The current issue of AMN is devoted to an updated version of that index and was compiled by Roberta Score, Claire Dardano, and Becky Holley.

The following pages provide two different types of comprehensive listings that, taken together, represent the state of the collection as of August, 1986. The formats of Tables 1 and 2 are basically those that have been used in previous AMN issues. However, as an additional feature, Table 1 includes references to the original published classification/description of each specimen.

Each "Weight" entry refers to the original weight of the recovered specimen. In most cases, the available mass of the remaining specimen is less than the original weight as a consequence of consumption of material for research. In the cases of the 1977 and 1978 collections, which resulted from joint expeditions by workers from the USA and Japan, specimens were equally divided for research programs in the USA and Japan. Consequently, the available mass of the remaining specimen in the USA collection is at least a factor of two less than the original weight listed in Table 1.

"Weathering" and "Fracturing" categories, based on qualitative observations made during initial processing of each specimen at Johnson Space Center, are defined as follows:

"Weathering" categories:

- A: Minor rustiness; rust haloes on metal particles and rust stains along fractures are minor.
- B: Moderate rustiness; large rust haloes occur on metal particles and rust stains on internal fractures are extensive.
- C: Severe rustiness; metal particles have been mostly, if not totally, converted to rust and the specimen is uniformly stained by rust throughout.

Degrees of weathering for meteorites that do not contain metal are based mostly on overall rustiness whereas degrees of weathering assigned to metal-bearing meteorites are influenced largely by rustiness of metal grains. Therefore, in addition to difficulties that can be expected in comparing weathering states of achondrites with those of chondrites, the A-B-C scale is difficult to apply uniformly to either achondrites (e.g., aubrite vs. eucrite) or chondrites (e.g., H-, L-, or LL-chondrite vs. C-chondrite).

"Fracturing" categories:

- A: Minor cracks; few or no cracks are conspicuous to the naked eye and no cracks penetrate the entire specimen.
- B: Moderate cracks; several cracks extend across exterior surfaces of the specimen and can be readily broken along the cracks.
- C: Severe cracks; specimen readily crumbles along cracks that are both extensive and abundant.

Each entry under the "Smithsonian" column refers to the "No." and beginning page number of the appropriate chapter in the Smithsonian publication (see below). Each entry in the "Newsletter" column refers to the "Vol. (No.)" of the corresponding issue of the AMN. For example, the entries "26,23" and "5(4), 6(1)" for ALHA81005 indicate that descriptions of the meteorite can be found in the chapter beginning on page 23 in Smithsonian Contributions to the Earth Sciences No. 26 and in AMN issues 5(4) and 6(1). Readers should refer to all of the cited references in order to follow changes in classification that have occurred for some specimens. The currently accepted classification of each specimen is listed under the "Classification" column in Table 1 and may not necessarily be the same as given in the original description.

Full citations of Smithsonian references are as follows:

Marvin, U. B. and B. Mason (eds.) (1984) Field and Laboratory Investigations of Meteorites from Victoria Land, Antarctica, Smithsonian Contr. Earth Sci. No. 26, Smithsonian Institution Press, 134 pp.

Marvin, U. B. and B. Mason (eds.) (1982) Catalog of Meteorites from Victoria Land, Antarctica, 1978-1980, Smithsonian Contr. Earth Sci. No. 24, Smithsonian Institution Press, 97 pp.

Marvin, U. B. and B. Mason (eds.) (1980) Catalog of Antarctic Meteorites, 1977-1978, Smithsonian Contr. Earth Sci. No. 23, Smithsonian Institution Press, 50 pp.

Requests for copies of the Smithsonian publications should be sent to one of the Smithsonian editors:

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Back issues of AMN can be obtained from the following address:

Curator/Antarctic Meteorites
SN2/Planetary Materials Branch
NASA Johnson Space Center
Houston, TX 77058

Telephone: (713) 483-3274.

Table 1.

Classified Meteorites from the 1976-1985 Collections
(as of August, 1986)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA76001	20151.0	L-6 CHONDRITE	A	A	23,12	
ALHA76002	307.0	IRON-GROUP IA			24,49	1(3)
					23,12	4(1)
ALHA76003	10495.0	L-6 CHONDRITE	A	A	23,12	
ALHA76004	52.5	LL-3 CHONDRITE	A	A	23,12	1(3)
						4(1)
ALHA76005	317.3	EUCRITE (POLYMICT)	A	A	23,12	2(1)
						4(1)
ALHA76006	271.0	H-6 CHONDRITE	C	B	23,12	1(3)
						4(1)
ALHA76007	78.5	L-6 CHONDRITE	B	A	23,12	1(3)
						4(1)
ALHA76008	281.3	H-6 CHONDRITE	B/C	B	23,12	1(3)
						4(1)
ALHA76009	3950.0	L-6 CHONDRITE	B	B	23,12	1(3)
						4(1)
ALHA77001	252.0	L-6 CHONDRITE	B	B	23,12	1(1)
						1(2)
						4(1)
ALHA77002	235.2	L-5 CHONDRITE	B	A/B	23,12	1(1)
						1(2)
						4(1)
ALHA77003	779.6	CARBONACEOUS C30	A	A	23,12	1(2)
						4(1)
						4(2)
ALHA77004	2230.0	H-4 CHONDRITE	C	C	23,12	2(1)
						4(1)
ALHA77005	482.5	SHERGOTTITE	A	A	23,12	1(2)
						1(3)
						4(1)
ALHA77007 @	99.3	H-5 CHONDRITE	B		26,55	6(2)
ALHA77008 @	93.0	L-6 CHONDRITE	A		26,55	6(2)
ALHA77009	235.5	H-4 CHONDRITE	C	A		3(1)
						4(1)
ALHA77010	295.8	H-4 CHONDRITE	C	A		3(1)
						4(1)
ALHA77011	291.5	L-3 CHONDRITE	C	A	26,55	3(1)
						4(1)
						4(2)
ALHA77012	180.2	H-5 CHONDRITE	C	A		3(1)
						4(1)
ALHA77013 @	23.0	L-3 CHONDRITE	B		26,55	6(2)
ALHA77014	308.8	H-5 CHONDRITE	C	B/C	23,12	2(1)
						4(1)
ALHA77015	411.1	L-3 CHONDRITE	C	B	23,12	2(1)
						4(1)
ALHA77016 @	78.3	H-5 CHONDRITE	B		26,55	6(2)
ALHA77017 @	77.9	H-5 CHONDRITE	B		26,55	6(2)
ALHA77018 @	51.8	H-5 CHONDRITE	B/C		26,55	6(2)
ALHA77019 @	59.8	L-6 CHONDRITE	B/C		26,55	6(2)
ALHA77021	16.7	H-5 CHONDRITE	C	A	23,12	1(2)
						4(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA77022 @	16.0	H-5 CHONDRITE	A		26,55	6(2)
ALHA77023 @	21.4	H-5 CHONDRITE	B		26,55	6(2)
ALHA77025	19.4	H-5 CHONDRITE	C	B	23,12	1(2)
						4(1)
ALHA77026 @	20.3	L-6 CHONDRITE	B/C		26,55	6(2)
ALHA77027 @	3.7	L-6 CHONDRITE	B/C		26,55	6(2)
ALHA77029 @	1.4	CARBONACEOUS C30	A/B		26,55	6(2)
ALHA77031 @	0.5	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77033	9.3	L-3 CHONDRITE	C	B	23,12	1(2)
						4(1)
ALHA77034 @	1.8	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77036 @	8.5	L-3 CHONDRITE	B		26,55	6(2)
ALHA77038 @	18.8	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77039 @	8.2	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77041 @	16.6	LL-6 CHONDRITE	A		26,55	6(2)
ALHA77042 @	20.4	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77043 @	11.4	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77045 @	17.9	H-5 CHONDRITE	A		26,55	6(2)
ALHA77046 @	7.6	H-6 CHONDRITE	A/B		26,55	6(2)
ALHA77047 @	20.5	L-3 CHONDRITE	C		26,55	6(2)
ALHA77049 @	7.3	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77050 @	84.2	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77051 @	15.0	H-5 CHONDRITE	A		26,55	6(2)
ALHA77052 @	112.2	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77054 @	10.4	H-5 CHONDRITE	B		26,55	6(2)
ALHA77056 @	12.3	H-4 CHONDRITE	A/B		26,55	6(2)
ALHA77058 @	3.7	H-5 CHONDRITE	B		26,55	6(2)
ALHA77060 @	64.4	LL-5 CHONDRITE	A		26,55	6(2)
ALHA77061	12.6	H-5 CHONDRITE	B	A	23,12	1(2)
						4(1)
ALHA77062	16.7	H-5 CHONDRITE	B	B	23,12	1(2)
						4(1)
ALHA77063 @	2.9	H-5 CHONDRITE	B		26,55	6(2)
ALHA77064	6.5	H-5 CHONDRITE	B	B	23,12	1(2)
						4(1)
ALHA77066 @	4.9	H-5 CHONDRITE	A		26,55	6(2)
ALHA77069 @	0.8	L-6 CHONDRITE	B/C		26,55	6(2)
ALHA77070 @	18.4	H-5 CHONDRITE	B		26,55	6(2)
ALHA77071	10.9	H-5 CHONDRITE	B	B	23,12	1(2)
						4(1)
ALHA77073 @	10.1	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77074	12.1	H-5 CHONDRITE	B	B	23,12	1(2)
						4(1)
ALHA77076 @	1.7	H-5 CHONDRITE	B		26,55	6(2)
ALHA77078 @	24.1	H-5 CHONDRITE	B		26,55	6(2)
ALHA77079 @	7.8	H-5 CHONDRITE	A		26,55	6(2)
ALHA77081	8.6	H(?) CHONDRITE	B	A	23,12	1(2)
						4(1)
ALHA77082 @	12.0	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77084 @	44.1	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77085 @	45.9	H-5 CHONDRITE	B		26,55	6(2)
ALHA77086	19.4	H-5 CHONDRITE	C	B	23,12	1(2)
						4(1)
ALHA77087 @	30.7	H-5 CHONDRITE	B		26,55	6(2)
ALHA77088	51.2	H-5 CHONDRITE	C	B	23,12	1(2)
						4(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA77089 @	7.8	L-6 CHONDRITE	B		26,55	6(2)
ALHA77091 @	4.2	H-5 CHONDRITE	B/C		26,55	6(2)
ALHA77092 @	45.0	H-5 CHONDRITE	A		26,55	6(2)
ALHA77094 @	6.6	H-5 CHONDRITE	B		26,55	6(2)
ALHA77096 @	2.5	H-5 CHONDRITE	A		26,55	6(2)
ALHA77098 @	8.0	H-5 CHONDRITE	B		26,55	6(2)
ALHA77100 @	18.2	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77101 @	3.8	H-5 CHONDRITE	B		26,55	6(2)
ALHA77102	12.3	H-5 CHONDRITE	B	B	23,12	1(2)
						4(1)
ALHA77104 @	6.3	H-5 CHONDRITE	A		26,55	6(2)
ALHA77106 @	7.8	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77108 @	0.7	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77111 @	52.3	H-6 CHONDRITE	A/B		26,55	6(2)
ALHA77112 @	21.7	H-5 CHONDRITE	A		26,55	6(2)
ALHA77113 @	2.0	H-5 CHONDRITE	B		26,55	6(2)
ALHA77114 @	44.5	H-5 CHONDRITE	B		26,55	6(2)
ALHA77115 @	154.4	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77117 @	20.8	L-5 CHONDRITE	A/B		26,55	6(2)
ALHA77118	7.8	H-5 CHONDRITE	C	B	23,12	1(2)
						4(1)
ALHA77119	6.4	H-5 CHONDRITE	C	B	23,12	1(2)
						4(1)
ALHA77120 @	3.9	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77122 @	4.6	H-5 CHONDRITE	B		26,55	6(2)
ALHA77124	4.4	H-5 CHONDRITE	C	A	23,12	1(2)
						4(1)
ALHA77125 @	18.7	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77126 @	25.2	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77127 @	3.8	L-5 CHONDRITE	B		26,55	6(2)
ALHA77129 @	1.7	H-5 CHONDRITE	B		26,55	6(2)
ALHA77130 @	24.8	H-5 CHONDRITE	A		26,55	6(2)
ALHA77131 @	25.9	H-6 CHONDRITE	A/B		26,55	6(2)
ALHA77132 @	115.4	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77133 @	18.7	H-6 CHONDRITE	A		26,55	6(2)
ALHA77134 @	19.1	H-6 CHONDRITE	A		26,55	6(2)
ALHA77136 @	3.6	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77138 @	2.1	H-5 CHONDRITE	A		26,55	6(2)
ALHA77139 @	65.9	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77140	78.6	L-3 CHONDRITE	C	B	23,12	1(2)
						4(1)
ALHA77142 @	3.1	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77143 @	39.0	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77144	7.9	H-6 CHONDRITE	B	A	23,12	1(2)
						4(1)
ALHA77146 @	18.2	H-6 CHONDRITE	A/B		26,55	6(2)
ALHA77147 @	18.7	H-6 CHONDRITE	A/B		26,55	6(2)
ALHA77148	13.1	H-6 CHONDRITE	C	B	23,12	1(2)
						4(1)
ALHA77149 @	25.6	H-6 CHONDRITE	A/B		26,55	6(2)
ALHA77150	58.3	L-6 CHONDRITE	C	B	23,12	1(2)
						4(1)
ALHA77151 @	16.9	H-5 CHONDRITE	A		26,55	6(2)
ALHA77152 @	17.8	H-5 CHONDRITE	A		26,55	6(2)
ALHA77153 @	12.0	H-5 CHONDRITE	A		26,55	6(2)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA77155	305.3	L-6 CHONDRITE	A/B	A	23,12	2(1) 4(1)
ALHA77156 @	17.7	EH-4 CHONDRITE	B		26,55	6(2)
ALHA77157 @	88.3	H-6 CHONDRITE	A/B		26,55	6(2)
ALHA77158 @	19.9	H-5 CHONDRITE	B		26,55	6(2)
ALHA77159 @	17.0	L-6 CHONDRITE	A/B		26,55	6(2)
ALHA77160	70.4	L-3 CHONDRITE	C	B	23,12	1(3) 4(1)
ALHA77161 @	6.1	H-5 CHONDRITE	B		26,55	6(2)
ALHA77162 @	29.0	L-6 CHONDRITE	A		26,55	6(2)
ALHA77163 @	24.3	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77164	38.1	L-3 CHONDRITE	C	C	23,12	1(3) 4(1)
ALHA77165	30.5	L-3 CHONDRITE	C	C	23,12	1(3) 4(1)
ALHA77166 @	138.8	L-3 CHONDRITE	C		26,55	6(2)
ALHA77167	611.2	L-3 CHONDRITE	C	B/C	23,12	2(1) 4(1)
ALHA77168 @	24.7	H-5 CHONDRITE	B		26,55	6(2)
ALHA77170 @	12.2	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77171 @	23.8	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77173 @	25.8	H-5 CHONDRITE	B		26,55	6(2)
ALHA77174 @	32.4	H-5 CHONDRITE	A		26,55	6(2)
ALHA77175 @	23.3	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77176 @	55.4	L-3 CHONDRITE	B		26,55	6(2)
ALHA77177	368.2	H-5 CHONDRITE	C	A	23,12	2(1) 4(1)
ALHA77178 @	5.7	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77180	190.8	L-6 CHONDRITE	C	A	24,19	3(1) 4(1)
ALHA77181 @	33.0	H-5 CHONDRITE	B		26,55	6(2)
ALHA77182	1134.7	H-5 CHONDRITE	C	B	23,12	2(1) 4(1)
ALHA77183	288.0	H-6 CHONDRITE	C	A	24,19	3(1) 4(1)
ALHA77184 @	127.6	H-5 CHONDRITE	B		26,55	6(2)
ALHA77185 @	28.0	L-3 CHONDRITE	A/B		26,55	6(2)
ALHA77186 @	122.4	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77187 @	52.2	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77188 @	109.0	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77190	387.1	H-4 CHONDRITE	C	C	23,12	2(1) 4(1)
ALHA77191	642.2	H-4 CHONDRITE	C	B/C	23,12	2(1) 4(1)
ALHA77192	845.3	H-4 CHONDRITE	C	C	23,12	2(1) 4(1)
ALHA77193 @	6.7	H-5 CHONDRITE	A		26,55	6(2)
ALHA77195 @	4.7	H-5 CHONDRITE	A		26,55	6(2)
ALHA77197 @	20.3	L-3 CHONDRITE	A/B		26,55	6(2)
ALHA77198 @	7.3	L-6 CHONDRITE	B		26,55	6(2)
ALHA77200 @	0.9	H-6 CHONDRITE	C		26,55	6(2)
ALHA77201 @	15.0	H-5 CHONDRITE	A		26,55	6(2)
ALHA77202 @	2.7	H-5 CHONDRITE	B		26,55	6(2)
ALHA77205 @	3.1	H-5 CHONDRITE	B		26,55	6(2)
ALHA77207 @	4.9	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77208	1733.0	H-4 CHONDRITE	C	C	23,12	1(3) 4(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA77209 @	31.8	H-6 CHONDRITE	B		26,55	6(2)
ALHA77211 @	26.7	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77212 @	16.8	H-6 CHONDRITE	A/B		26,55	6(2)
ALHA77213 @	8.4	H-5 CHONDRITE	A		26,55	6(2)
ALHA77214	2111.0	L-3 CHONDRITE	C	C	23,12	1(2)
						4(1)
ALHA77215	819.6	L-3 CHONDRITE	B	B/C	23,12	2(1)
						4(1)
ALHA77216	1470.0	L-3 CHONDRITE	A/B	B/C	23,12	2(1)
						4(1)
ALHA77217	413.2	L-3 CHONDRITE	B	B/C		2(1)
						4(1)
ALHA77218 @	45.1	L-5 CHONDRITE	A		26,55	6(2)
ALHA77219	637.1	MESOSIDERITE	B	B	23,12	1(3)
						4(1)
ALHA77220 @	69.1	H-5 CHONDRITE	B		26,55	6(2)
ALHA77221	229.2	H-4 CHONDRITE	C	A	24,19	3(1)
						4(1)
ALHA77222 @	125.4	H-4 CHONDRITE	A/B		26,55	6(2)
ALHA77223	207.9	H-4 CHONDRITE	C	C	24,19	3(1)
						4(1)
ALHA77224	786.9	H-4 CHONDRITE	C	C	23,12	1(3)
						4(1)
ALHA77225	5878.0	H-4 CHONDRITE	C	C	24,19	3(1)
						4(1)
ALHA77226	15323.0	H-4 CHONDRITE	C	C	24,19	3(2)
						4(1)
ALHA77227 @	16.0	H-5 CHONDRITE	A		26,55	6(2)
ALHA77228 @	19.3	H-5 CHONDRITE	B		26,55	6(2)
ALHA77230	2473.0	L-4 CHONDRITE	C	B	23,12	1(3)
						4(1)
ALHA77231	9270.0	L-6 CHONDRITE	A/B	A/B	23,12	2(1)
						4(1)
ALHA77232	6494.3	H-4 CHONDRITE	C	C	24,19	3(1)
						4(1)
ALHA77233	4087.0	H-4 CHONDRITE	C	B	23,12	2(1)
						4(1)
ALHA77235 @	4.9	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77237 @	4.1	H-5 CHONDRITE	A		26,55	6(2)
ALHA77239 @	19.0	H-6 CHONDRITE	B		26,55	6(2)
ALHA77240 @	25.1	H-5 CHONDRITE	A		26,55	6(2)
ALHA77241 @	144.1	L-3 CHONDRITE	C		26,55	6(2)
ALHA77242 @	56.5	H-5 CHONDRITE	B		26,55	6(2)
ALHA77244 @	39.5	L-3 CHONDRITE	B/C		26,55	6(2)
ALHA77245 @	33.4	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77246 @	41.6	H-6 CHONDRITE	B		26,55	6(2)
ALHA77247 @	44.3	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77248 @	96.1	H-6 CHONDRITE	B/C		26,55	6(2)
ALHA77249	503.6	L-3 CHONDRITE	C	C	23,12	2(1)
						4(1)
ALHA77250	10555.0	IRON-GROUP IA			24,49	1(3)
					23,12	3(2)
						4(1)
ALHA77251 @	68.8	L-6 CHONDRITE	B		26,55	6(2)
ALHA77252	343.1	L-3 CHONDRITE	B	C	23,12	2(1)
						4(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA77253 @	23.6	H-5 CHONDRITE	A/B		26,55	6(2)
ALHA77254	245.8	L-5 CHONDRITE	A/B	A	23,12	2(1)
						4(1)
ALHA77255	765.1	IRON-ATAXITE (ANOM)			24,49	2(1)
					23,12	3(2)
						4(1)
ALHA77256	676.2	DIOGENITE	A/B	A	23,12	1(2)
						4(1)
ALHA77257	1995.7	UREILITE	A	B	23,12	1(2)
						4(1)
ALHA77258	597.3	H-6 CHONDRITE	B/C	A/B	23,12	2(1)
						4(1)
ALHA77259	294.0	H-5 CHONDRITE	C	B	24,19	3(1)
						4(1)
ALHA77260	744.3	L-3 CHONDRITE	C	C	23,12	2(1)
						4(1)
ALHA77261	411.7	L-6 CHONDRITE	B	B	23,12	2(1)
						4(1)
ALHA77262	861.5	H-4 CHONDRITE	B/C	B	23,12	2(1)
						4(1)
ALHA77263	1669.0	IRON-GROUP IA			24,49	2(1)
					23,12	3(2)
						4(1)
ALHA77264	11.0	H-5 CHONDRITE	A/B	A	23,12	1(2)
						4(1)
ALHA77265 @	18.3	H-5 CHONDRITE	B		26,55	6(2)
ALHA77266 @	108.4	H-5 CHONDRITE	B		26,55	6(2)
ALHA77267 @	103.5	L-5 CHONDRITE	A		26,55	6(2)
ALHA77268	272.0	H-5 CHONDRITE	C	C	24,19	3(1)
						4(1)
ALHA77269	1045.0	L-6 CHONDRITE	B	A	23,12	1(3)
						4(1)
ALHA77270	588.9	L-6 CHONDRITE	A/B	B	23,12	2(1)
						4(1)
ALHA77271	609.5	H-6 CHONDRITE	C	A	23,12	1(3)
						4(1)
ALHA77272	674.1	L-6 CHONDRITE	B/C	B	23,12	1(2)
						4(1)
ALHA77273	492.0	L-6 CHONDRITE	B	B	23,12	1(3)
						4(1)
ALHA77274	288.1	H-5 CHONDRITE	C	A	24,19	3(1)
						4(1)
ALHA77275 @	24.9	H-5 CHONDRITE	A		26,55	6(2)
ALHA77277	142.7	L-6 CHONDRITE	A/B	A	23,12	1(3)
						4(1)
ALHA77278	312.9	LL-3 CHONDRITE	A	A	23,12	1(2)
						4(1)
ALHA77279 @	174.5	H-5 CHONDRITE	A		26,55	6(2)
ALHA77280	3226.0	L-6 CHONDRITE	B	B/C	23,12	1(3)
						4(1)
ALHA77281	1231.0	L-6 CHONDRITE	B	B	23,12	1(3)
						4(1)
ALHA77282	4127.1	L-6 CHONDRITE	B	B	23,12	1(3)
						4(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA77283	10510.0	IRON-GROUP IA			24,49 23,12	1(3) 3(2) 4(1)
ALHA77284	376.2	L-6 CHONDRITE	A/B	B	23,12	2(1) 4(1)
ALHA77285	271.1	H-6 CHONDRITE	C	B	23,12	2(1) 4(1)
ALHA77286	245.8	H-4 CHONDRITE	C	B	24,19	3(1) 4(1)
ALHA77287	230.1	H-5 CHONDRITE	C	A	24,19 23,12	3(1) 4(1)
ALHA77288	1880.0	H-6 CHONDRITE	C	B	23,12	1(3) 4(1)
ALHA77289	2186.0	IRON-GROUP IA			24,49 23,12	2(1) 3(2) 4(1)
ALHA77290	3784.0	IRON-GROUP IA			24,49 23,12	1(3) 3(2) 4(1)
ALHA77291 @ ALHA77292	5.8 199.6	H-5 CHONDRITE L-6 CHONDRITE	A B	A	26,55 24,19	6(2) 3(1) 4(1)
ALHA77293 @ ALHA77294	109.7 1351.0	L-6 CHONDRITE H-5 CHONDRITE	B A	A	26,55 23,12	6(2) 2(1) 4(1)
ALHA77295 @ ALHA77296	141.3 963.3	EH-4 CHONDRITE L-6 CHONDRITE	B A/B	A	26,55 23,12	6(2) 2(1) 4(1)
ALHA77297	951.6	L-6 CHONDRITE	A	B	23,12	2(1) 4(1)
ALHA77299	260.7	H-3 CHONDRITE	A	A	23,12	1(2) 4(1)
ALHA77300	234.5	H-5 CHONDRITE	C	B	23,12	2(1) 4(1)
ALHA77301 @ ALHA77302	54.9 235.5	L-6 CHONDRITE EUCRITE (POLYMICT)	A A	A	26,55 23,12	6(2) 1(2) 1(3) 4(1)
ALHA77303 @ ALHA77304	78.6 650.4	L-3 CHONDRITE L-4 CHONDRITE	B/C B	B	26,55 23,12	6(2) 2(1) 4(1)
ALHA77305	6444.0	L-6 CHONDRITE	B/C	B	23,12	1(3) 4(1)
ALHA77306	19.9	CARBONACEOUS C2	A	A	23,12	1(1) 1(2) 1(3) 4(1)
ALHA77307	181.3	CARBONACEOUS C3	A	A	23,12	1(3) 4(1)
ALHA78001 + ALHA78002 + ALHA78003	84.5 11.5 124.8	H-5 CHONDRITE H-6 CHONDRITE L-6 CHONDRITE	B A C	B		8(2) 8(2) 7(2)
ALHA78004 * ALHA78005 + ALHA78006	35.9 28.2 8.0	H-5 CHONDRITE H-5 CHONDRITE HOWARDITE	B A	A	24,19	6(2) 8(2) 2(2) 4(1)
ALHA78008	7.4	H-5 CHONDRITE				7(2)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA78010 +	1.3	H-5 CHONDRITE	B			8(2)
ALHA78012	38.1	H-5 CHONDRITE				7(2)
ALHA78013	4.1	L-3 CHONDRITE				7(2)
ALHA78015 *	34.9	LL(?L)-3 CHONDRITE				6(2)
ALHA78017 +	2.9	L-3 CHONDRITE	B			8(2)
ALHA78018 +	17.9	H-5 CHONDRITE	B			8(2)
ALHA78019	30.3	UREILITE	B/C	C	24,19	2(2)
						4(1)
ALHA78021	17.1	H-5 CHONDRITE				7(2)
ALHA78023	9.8	H-5 CHONDRITE				7(2)
ALHA78025 +	8.3	H-5 CHONDRITE	A			8(2)
ALHA78027 *	29.2	H-5 CHONDRITE				6(2)
ALHA78028	4.4	H-5 CHONDRITE				7(2)
ALHA78029 +	4.1	H-4 CHONDRITE	B			8(2)
ALHA78031	4.6	H-5 CHONDRITE				7(2)
ALHA78033 +	5.0	H-4 CHONDRITE	B			8(2)
ALHA78035	2.5	H-6 CHONDRITE				7(2)
ALHA78037 +	0.5	L-3 CHONDRITE	B			8(2)
ALHA78038	363.0	L-3 CHONDRITE	C	C	24,19	3(2)
						4(1)
						4(2)
ALHA78039	299.0	L-6 CHONDRITE	B	B	24,19	3(2)
						4(1)
ALHA78040	211.7	EUCRITE (POLYMICT)	A	A	24,19	2(2)
						4(1)
ALHA78041 +	117.5	L-3 CHONDRITE	B			8(2)
ALHA78042	214.1	L-6 CHONDRITE	B	A	24,19	3(2)
						4(1)
ALHA78043	680.0	L-6 CHONDRITE	B	B	24,19	3(2)
						4(1)
ALHA78044	164.1	L-4 CHONDRITE	B/C	B		4(1)
						4(2)
ALHA78045	396.5	L-6 CHONDRITE	B/C	B	24,19	3(2)
						4(1)
ALHA78046	70.0	L-3 CHONDRITE				7(2)
ALHA78047 *	130.3	H-5 CHONDRITE	B	B		6(2)
ALHA78048	190.6	L-6 CHONDRITE	A/B	B	24,19	3(2)
						4(1)
ALHA78049 +	95.8	H-5 CHONDRITE	B			8(2)
ALHA78050	1045.0	L-6 CHONDRITE	B	B	24,19	3(1)
						4(1)
ALHA78051	119.5	H-4 CHONDRITE				7(2)
ALHA78052 *	97.3	H-5 CHONDRITE	C	B		6(2)
ALHA78053	179.0	H-4 CHONDRITE	C	B	24,19	3(2)
						4(1)
ALHA78055 +	13.7	L-6 CHONDRITE	B			8(2)
ALHA78057	8.7	H-4 CHONDRITE				7(2)
ALHA78059 +	9.1	L-6 CHONDRITE	B			8(2)
ALHA78062	10.9	LL-6 CHONDRITE				7(2)
ALHA78063 +	76.7	LL-6 CHONDRITE	A			8(2)
ALHA78065 +	7.3	H-6 CHONDRITE	B			8(2)
ALHA78067	7.8	H-6 CHONDRITE				7(2)
ALHA78069 +	4.4	H-6 CHONDRITE	B			8(2)
ALHA78070	10.0	L-4 CHONDRITE				7(2)
ALHA78074	200.2	L-6 CHONDRITE	B	B	24,19	3(2)
						4(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA78075	280.6	H-5 CHONDRITE	B/C	B	24,19	3(2)
ALHA78076	275.6	H-6 CHONDRITE	B	B	24,19	4(1)
ALHA78077	330.6	H-4 CHONDRITE	C	B	24,19	3(2)
ALHA78078	290.3	L-6 CHONDRITE	A/B	A	24,19	4(1)
ALHA78079	4.5	H-5 CHONDRITE				3(2)
ALHA78080	24.8	H-5 CHONDRITE				4(1)
ALHA78081 *	17.8	H-5 CHONDRITE				7(2)
ALHA78082 +	24.0	LL-6 CHONDRITE	A			7(2)
ALHA78084	14280.0	H-4 CHONDRITE	B/C	B	24,19	6(2)
ALHA78085	219.3	H-5 CHONDRITE	B	B	24,19	8(2)
ALHA78086 *	9.0	H-6 CHONDRITE				3(3)
ALHA78088 *	5.2	H-5 CHONDRITE				4(1)
ALHA78090 *	7.5	H-5 CHONDRITE				3(2)
ALHA78092 *	16.3	H-5 CHONDRITE				4(1)
ALHA78094 *	4.0	H-5 CHONDRITE				6(2)
ALHA78096 *	7.5	H-5 CHONDRITE				6(2)
ALHA78098 *	2.2	H-5 CHONDRITE				6(2)
ALHA78100	84.9	IRON-GROUP IIA			24,49	6(2)
ALHA78101	121.2	L-6 CHONDRITE				4(1)
ALHA78102	336.9	H-5 CHONDRITE	B/C	B	24,19	7(2)
ALHA78103	589.7	L-6 CHONDRITE	B	B	24,19	3(1)
ALHA78104	672.4	L-6 CHONDRITE	B	A	24,19	3(2)
ALHA78105	941.7	L-6 CHONDRITE	B	A	24,19	4(1)
ALHA78106	464.5	L-6 CHONDRITE	A/B	A	24,19	3(1)
ALHA78107	198.4	H-5 CHONDRITE	C	A	24,19	4(1)
ALHA78108	172.5	H-5 CHONDRITE	B	B	24,19	3(2)
ALHA78109	233.2	LL-5 CHONDRITE	A/B	A	24,19	4(1)
ALHA78110	160.7	H-5 CHONDRITE	B/C	B	24,19	3(2)
ALHA78111	126.8	H-5 CHONDRITE	B/C	A		4(1)
ALHA78112	2485.0	L-6 CHONDRITE	B	B	24,19	4(2)
ALHA78113	298.6	AUBRITE	A/B	A	24,19	3(2)
ALHA78114	808.1	L-6 CHONDRITE	B/C	B	24,19	4(1)
ALHA78115	847.6	H-6 CHONDRITE	B	A	24,19	2(2)
						4(1)
						3(2)
						4(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA78116 *	127.8	H-5 CHONDRITE	B	B		6(2)
ALHA78117 +	4.3	H-5 CHONDRITE	A			8(2)
ALHA78119 +	102.6	L-3 CHONDRITE	A			8(2)
ALHA78120	44.3	H-4 CHONDRITE				7(2)
ALHA78121 *	30.4	H-5 CHONDRITE				6(2)
ALHA78122	4.7	H-6 CHONDRITE				7(2)
ALHA78123 +	18.4	H-5 CHONDRITE	B			8(2)
ALHA78124	27.7	H-6 CHONDRITE				7(2)
ALHA78125 *	18.8	L-6 CHONDRITE	B	B		6(2)
ALHA78126	606.9	L-6 CHONDRITE	B	B	24, 19	3(2)
						4(1)
ALHA78127	194.5	L-6 CHONDRITE	B/C	B	24, 19	3(2)
						4(1)
ALHA78128	154.7	H-5 CHONDRITE	C	B/C	24, 19	3(2)
						4(1)
ALHA78129 +	128.3	H-5 CHONDRITE	B			8(2)
ALHA78130	2733.0	L-6 CHONDRITE	B/C	B	24, 19	3(2)
						4(1)
ALHA78131	268.8	L-6 CHONDRITE	B/C	A	24, 19	3(2)
						4(1)
ALHA78132	656.0	EUCRITE (POLYMICT)	A	A	24, 19	2(2)
						4(1)
ALHA78133	59.9	L-3 CHONDRITE				7(2)
ALHA78134	458.3	H-4 CHONDRITE	B/C	B/C	24, 19	3(2)
						4(1)
ALHA78135 *	130.8	H-6 CHONDRITE	B	B		6(2)
ALHA78136 +	51.6	H-5 CHONDRITE	A			8(2)
ALHA78137	70.0	H-6 CHONDRITE				7(2)
ALHA78138 +	10.8	LL-3 CHONDRITE	B			8(2)
ALHA78139 *	17.0	H-5 CHONDRITE				6(2)
ALHA78140 +	16.6	H-4 CHONDRITE	B			8(2)
ALHA78141	24.1	H-5 CHONDRITE				7(2)
ALHA78142 *	31.5	L-5 CHONDRITE				6(2)
ALHA78145 +	34.4	H-6 CHONDRITE	A			8(2)
ALHA78146	16.5	H-5 CHONDRITE				7(2)
ALHA78147 *	30.6	H-5,6 CHONDRITE				6(2)
ALHA78149 +	23.2	L-3 CHONDRITE	B			8(2)
ALHA78150	15.8	H-5 CHONDRITE				7(2)
ALHA78152	4.7	H-6 CHONDRITE				7(2)
ALHA78153	151.7	LL-6 CHONDRITE	B/C	B	24, 19	3(2)
						4(1)
ALHA78154 +	11.8	H-5 CHONDRITE	B			8(2)
ALHA78156	8.6	L-6 CHONDRITE				7(2)
ALHA78157 +	63.4	H-4 CHONDRITE	B			8(2)
ALHA78158	15.1	EUCRITE (POLYMICT)	A	A	24, 19	2(2)
						4(1)
ALHA78159	22.6	H-5 CHONDRITE				7(2)
ALHA78160 *	16.0	H-5 CHONDRITE				6(2)
ALHA78162 +	33.2	L-3 CHONDRITE	B			8(2)
ALHA78163 +	9.6	H-5 CHONDRITE	B			8(2)
ALHA78164	25.1	H-5 CHONDRITE				7(2)
ALHA78165	20.9	EUCRITE (POLYMICT)	A	A	24, 19	2(2)
						4(1)
ALHA78168 +	33.6	H-4 CHONDRITE	B			8(2)
ALHA78169 +	22.2	H-6 CHONDRITE	B			8(2)
ALHA78170 +	20.9	H-3 CHONDRITE	B			8(2)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA78171 +	22.5	L-6 CHONDRITE	B			8(2)
ALHA78172 +	29.4	H-4 CHONDRITE	B			8(2)
ALHA78173 +	19.8	H-5 CHONDRITE	B			8(2)
ALHA78174 +	13.5	H-5 CHONDRITE	B			8(2)
ALHA78176 +	8.2	L-3 CHONDRITE	B			8(2)
ALHA78178 +	7.2	H-5 CHONDRITE	B			8(2)
ALHA78180 +	7.9	L-3 CHONDRITE	B			8(2)
ALHA78182	10.1	H-5 CHONDRITE				7(2)
ALHA78184	8.2	H-6 CHONDRITE				7(2)
ALHA78186	3.1	L-3 CHONDRITE				7(2)
ALHA78188	0.9	L-3 CHONDRITE	C	B	24, 19	4(1)
ALHA78189	22.7	H-6 CHONDRITE				7(2)
ALHA78190	20.1	H-5 CHONDRITE				7(2)
ALHA78191	19.6	H-6 CHONDRITE				7(2)
ALHA78193	13.3	H-4 CHONDRITE	B/C	A	24, 19	4(1)
ALHA78194	24.5	H-5 CHONDRITE				7(2)
ALHA78196	11.2	H-4 CHONDRITE	B/C	B	24, 19	4(1)
ALHA78197	20.2	H-5 CHONDRITE				7(2)
ALHA78199	12.9	H-5 CHONDRITE				7(2)
ALHA78201	9.8	H-5 CHONDRITE				7(2)
ALHA78203	10.9	H-5 CHONDRITE				7(2)
ALHA78205	8.9	H-5 CHONDRITE				7(2)
ALHA78207	8.4	H-6 CHONDRITE				7(2)
ALHA78209	12.1	H-5 CHONDRITE	B/C	B	24, 19	4(1)
ALHA78211	11.5	H-6 CHONDRITE	B	B	24, 19	4(1)
ALHA78213	9.6	H-6 CHONDRITE	B	B	24, 19	4(1)
ALHA78215	6.4	H-6 CHONDRITE	B/C	B	24, 19	4(1)
ALHA78217 +	8.3	H-5 CHONDRITE	B			8(2)
ALHA78219 +	8.2	H-5 CHONDRITE	B			8(2)
ALHA78221	5.4	H-5 CHONDRITE	B	A	24, 19	4(1)
ALHA78223	6.5	H-4 CHONDRITE	B	B	24, 19	4(1)
ALHA78225	4.6	H-5 CHONDRITE	B	A	24, 19	4(1)
ALHA78227	2.4	H-5 CHONDRITE	B/C	B	24, 19	4(1)
ALHA78229	1.9	H-6 CHONDRITE	B	B	24, 19	4(1)
ALHA78231	1.9	H-6 CHONDRITE	B/C	B	24, 19	4(1)
ALHA78233	1.3	H-5 CHONDRITE	B/C	B	24, 19	4(1)
ALHA78235 +	19.2	L-3 CHONDRITE	B			8(2)
ALHA78236	14.4	L-3 CHONDRITE				7(2)
ALHA78238	9.8	L-3 CHONDRITE				7(2)
ALHA78239 +	16.0	L-3 CHONDRITE	B			8(2)
ALHA78241	6.5	H-5 CHONDRITE				7(2)
ALHA78243	1.9	L-3 CHONDRITE				7(2)
ALHA78245	4.0	H-5 CHONDRITE				7(2)
ALHA78247	2.7	H-5 CHONDRITE				7(2)
ALHA78249	4.2	H-6 CHONDRITE				7(2)
ALHA78251	1312.0	L-6 CHONDRITE	B	A	24, 19	3(1)
ALHA78252	2789.0	IRON-GROUP IVA			24, 49	4(1)
						2(1)
						3(2)
						4(1)
ALHA78253 +	6.8	H-5 CHONDRITE	B			8(2)
ALHA78255 +	3.2	H-5 CHONDRITE	A			8(2)
ALHA78257 +	2.1	H-5 CHONDRITE	B			8(2)
ALHA78259 +	6.2	H-5 CHONDRITE	A			8(2)
ALHA78261	5.1	CARBONACEOUS C2	A	A	24, 19	3(2)
						4(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA78262	26.2	UREILITE	B/C	A	24,19	3(2) 4(1)
ALHA79001	32.3	L-3 CHONDRITE	C	A	24,19	4(1)
ALHA79002	222.8	H-6 CHONDRITE	C	B	24,19	4(1)
ALHA79003	5.1	LL-3 CHONDRITE	B	B	24,19	4(1)
ALHA79004	34.9	H-5 CHON. W/ENCLAVES	B/C	B	24,19	4(1)
ALHA79005	60.0	H-6 CHONDRITE	B	B	24,19	4(1)
ALHA79006	41.0	H-5 CHONDRITE	B/C	B	24,19	4(1)
ALHA79007	142.3	L-6 CHONDRITE	A/B	B	24,19	4(1)
ALHA79008	12.0	H-5 CHONDRITE	B	B	24,19	4(1)
ALHA79009	75.7	H-5 CHONDRITE	C	A	24,19	4(1)
ALHA79010	25.1	H-5 CHONDRITE	B/C	B	24,19	4(1)
ALHA79011	14.0	H-5 CHONDRITE	B/C	A	24,19	4(1)
ALHA79012	191.9	H-5 CHONDRITE	C	B	24,19	4(1)
ALHA79013	28.3	H-5 CHONDRITE	C	B	24,19	4(1)
ALHA79014	10.8	H-5 CHONDRITE	B	A	24,19	4(1)
ALHA79015	64.0	H-5 CHONDRITE	B	B	24,19	4(1)
ALHA79016	1146.0	H-6 CHONDRITE	B/C	B	24,19	4(1)
ALHA79017	310.0	EUCRITE (POLYMICT)	A	A	24,19	3(3) 4(1)
ALHA79018	120.7	L-6 CHONDRITE	B/C	A/B	24,19	4(1)
ALHA79019	12.1	H-6 CHONDRITE	B	A	24,19	4(1)
ALHA79020	4.2	H-6 CHONDRITE	B/C	B	24,19	4(1)
ALHA79021	29.4	H-5 CHONDRITE	B	A	24,19	4(1)
ALHA79022	31.4	L-3,4 CHONDRITE	A/B	B	24,19	4(1) 4(2)
ALHA79023	68.1	H-4 CHONDRITE	B/C	C	24,19	4(1)
ALHA79024	21.6	H-6 CHONDRITE	C	B	24,19	4(1)
ALHA79025	1208.0	H-5 CHONDRITE	C	A	24,19	4(1)
ALHA79026	572.0	H-5 CHONDRITE	B	B	24,19	4(1)
ALHA79027	133.2	L-6 CHONDRITE	B	A	24,19	4(1)
ALHA79028	16.3	H-6 CHONDRITE	B	B	24,19	4(1)
ALHA79029	505.5	H-5 CHONDRITE	C	B/C	24,19	4(1)
ALHA79031	2.7	H-5 CHONDRITE	C	B	24,19	4(1)
ALHA79032	2.6	H-5 CHONDRITE	C	B	24,19	4(1)
ALHA79033	280.8	L-6 CHONDRITE	B	A	24,19	4(1)
ALHA79034	12.6	H-6 CHONDRITE	B	A	24,19	4(1)
ALHA79035	37.6	H-4 CHONDRITE	B	B	24,19	4(1)
ALHA79036	20.2	H-5 CHONDRITE	B	B	24,19	4(1)
ALHA79037	14.8	H-6 CHONDRITE	B	B	24,19	4(1)
ALHA79038	49.7	H-5 CHONDRITE	C	B	24,19	4(1)
ALHA79039	108.3	H-4 CHONDRITE	B	B	24,19	4(1)
ALHA79040	13.2	H-5 CHONDRITE	B	A	24,19	4(1)
ALHA79041	20.1	H-5 CHONDRITE	B	B	24,19	4(1)
ALHA79042	11.5	H-5 CHONDRITE	B	A	24,19	4(1)
ALHA79043	62.2	L-6 CHONDRITE	C	B	24,19	4(1)
ALHA79045	115.4	L-3 CHONDRITE	C	B	24,19	4(1)
ALHA79046	89.7	H-5 CHONDRITE	B	B	24,19	4(1)
ALHA79047	19.3	H-5 CHONDRITE	B	B	24,19	4(1)
ALHA79048	36.7	H-5 CHONDRITE	B	B	24,19	4(1)
ALHA79049	54.0	H-6 CHONDRITE	C	B	24,19	4(1)
ALHA79050	27.0	H-5 CHONDRITE	C	B	24,19	4(1)
ALHA79051	23.9	H-5 CHONDRITE	C	A	24,19	4(1)
ALHA79052	22.6	L-6 CHONDRITE	B/C	B	24,19	4(1)
ALHA79053	86.1	H-5 CHONDRITE	B/C	B	24,19	4(1)
ALHA79054	36.0	H-5 CHONDRITE	B	A	24,19	4(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA79055	15.3	H-6 CHONDRITE	B/C	B	24,19	4(1)
ALHA80101	8725.0	L-6 CHONDRITE	B	B		4(2)
ALHA80102	471.2	EUCRITE (POLYMICT)	A	B	26,23	5(1)
ALHA80103	535.9	L-6 CHONDRITE	B	A		4(2)
ALHA80104	882.0	IRON-ATAXITE			26,49	5(1)
ALHA80105	445.1	L-6 CHONDRITE	B	B		4(2)
ALHA80106	432.2	H-4 CHONDRITE	C	B	26,23	5(1)
ALHA80107	177.8	L-6 CHONDRITE	B	B		4(2)
ALHA80108	124.5	L-6 CHONDRITE	B	B		5(1)
ALHA80110	167.6	L-6 CHONDRITE	B	B		5(1)
ALHA80111	42.4	H-5 CHONDRITE	B	A		4(2)
ALHA80112	330.7	L-6 CHONDRITE	B	B		5(1)
ALHA80113	312.6	L-6 CHONDRITE	B	B/C		4(2)
ALHA80114	232.8	L-6 CHONDRITE	B	B		5(1)
ALHA80115	306.0	L-6 CHONDRITE	B	A		4(2)
ALHA80116	191.2	L-6 CHONDRITE	B/C	B		5(1)
ALHA80117	89.0	L-6 CHONDRITE	B	A		4(2)
ALHA80118	2.4	H-6 CHONDRITE	B	A	26,23	5(1)
ALHA80119	33.7	L-6 CHONDRITE	B	B		5(1)
ALHA80120	60.1	L-6 CHONDRITE	B	B		5(1)
ALHA80121	39.1	H-4 CHONDRITE	B/C	C	26,23	5(1)
ALHA80122	49.8	H-6 CHONDRITE	B/C	B	26,23	5(1)
ALHA80123	27.8	H-5 CHONDRITE	C	A	26,23	5(1)
ALHA80124	12.0	H-5 CHONDRITE	B	B		5(1)
ALHA80125	139.2	L-6 CHONDRITE	B/C	B		4(2)
ALHA80126	34.5	H-6 CHONDRITE	A/B	A	26,23	5(1)
ALHA80127	47.5	H-5 CHONDRITE	B	A		5(1)
ALHA80128	138.2	H-4 CHONDRITE	B	B/C	26,23	5(1)
ALHA80129	93.4	H-5 CHONDRITE	B	A		5(1)
ALHA80130	5.3	H-6 CHONDRITE	B/C	A	26,23	5(1)
ALHA80131	19.8	H-4 CHONDRITE	B	B	26,23	5(1)
ALHA80132	152.8	H-5 CHONDRITE	B	B	26,23	4(2)
ALHA80133	3.6	L-3 CHONDRITE	B	B	26,23	5(1)
ALHA81001	52.9	EUCRITE (ANOMALOUS)	A	B	26,23	6(1)
ALHA81002	14.0	CARBONACEOUS C2	A	B	26,23	6(1)
ALHA81003	10.1	CARBONACEOUS C3V	A/B	A/B	26,23	6(1)
ALHA81004	4.7	CARBONACEOUS C2	A/B	A	26,23	6(1)
ALHA81005	31.4	ANORTHOSITIC BRECCIA	A/B	A	26,23	5(4)
ALHA81006	254.9	EUCRITE (POLYMICT)	A	A/B	26,23	6(1)
ALHA81007	163.5	EUCRITE (POLYMICT)	A/B	A	26,23	6(1)
ALHA81008	43.8	EUCRITE (POLYMICT)	A/B	A/B	26,23	6(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALHA81009	229.0	EUCRITE	A	A	26,23	6(1) 7(1)
ALHA81010	219.1	EUCRITE (POLYMICT)	A	A	26,23	6(1)
ALHA81011	405.7	EUCRITIC BRECCIA	A/B	A	26,23	6(1)
ALHA81012	36.7	EUCRITE	A/B	A	26,23	6(1)
ALHA81013	17727.0	IRON			26,49	6(1)
ALHA81014	188.2	IRON			26,49	6(1)
ALHA81015	5489.0	H-5 CHONDRITE	B	B	26,23	6(1)
ALHA81016	3850.2	L-6 CHONDRITE	B	A	26,23	6(1)
ALHA81017	1434.4	L-5 CHONDRITE	B	A	26,23	6(1)
ALHA81018	2236.9	L-5 CHONDRITE	B	B	26,23	6(1)
ALHA81019	1051.2	H-5 CHONDRITE	B/C	B	26,23	6(1)
ALHA81020	1352.5	H-5 CHONDRITE	B	A	26,23	6(1)
ALHA81021	695.1	E-6 CHONDRITE	A	B	26,23	6(1)
ALHA81022	912.5	H-4 CHONDRITE	B/C	A	26,23	6(1)
ALHA81023	418.3	L-5 CHONDRITE	B	A/B	26,23	6(1)
ALHA81024	797.7	L-3 CHONDRITE	C	B	26,23	6(1)
ALHA81025	379.0	L-3 CHONDRITE	C	B	26,23	6(1)
ALHA81026	515.5	L-6 CHONDRITE	B	A	26,23	6(1)
ALHA81027	3835.3	L-6 CHONDRITE	C	A/B	26,23	6(1)
ALHA81028	80.1	L-6 CHONDRITE	B	B		6(2)
ALHA81029	153.0	L-6 CHONDRITE	C	A		6(2)
ALHA81030	1851.6	L-3 CHONDRITE	B/C	B/C	26,23	6(1)
ALHA81031	1594.9	L-3 CHONDRITE	C	B/C	26,23	6(1)
ALHA81032	726.8	L-3 CHONDRITE	C	A	26,23	6(1)
ALHA81033	252.4	H-5 CHONDRITE	C	C	26,23	6(1)
ALHA81034	254.9	H-5 CHONDRITE	B	B	26,23	6(1)
ALHA81035	256.1	H-6 CHONDRITE	C	A/B	26,23	6(1)
ALHA81036	252.1	H-5 CHONDRITE	C	A	26,23	6(1)
ALHA81037	320.3	H-6 CHONDRITE	B	A	26,23	6(1)
ALHA81038	229.0	H-6 CHONDRITE	C	B	26,23	6(1)
ALHA81039	205.9	H-5 CHONDRITE	A/B	B	26,23	6(1)
ALHA81040	194.5	L-4 CHONDRITE	B/C	A	26,23	6(1)
ALHA81041	728.8	H-4 CHONDRITE	C	C		6(2)
ALHA81042	534.4	H-5 CHONDRITE	C	C	26,23	6(1) 6(2)
ALHA81043	106.0	H-4 CHONDRITE	B/C	C		6(2)
ALHA81044	386.8	H-4 CHONDRITE	C	C	26,23	6(1) 6(2)
ALHA81045	90.2	H-4 CHONDRITE	C	B/C		6(2)
ALHA81046	16.6	H-4 CHONDRITE	C	B/C		6(2)
ALHA81047	81.2	H-4 CHONDRITE	B/C	B/C		6(2)
ALHA81048	190.6	H-4 CHONDRITE	B/C	B/C	26,23	6(1) 6(2)
ALHA81049	8.5	H-4 CHONDRITE	B/C	B		6(2)
ALHA81050	25.7	H-4 CHONDRITE	C	C		6(2)
ALHA81051	43.0	H-4 CHONDRITE	B/C	B		6(2)
ALHA81052	28.7	H-4 CHONDRITE	C	B		6(2)
ALHA81053	2.5	L-3 CHONDRITE	C	B		6(2)
ALHA81054	2.2	H-6 CHONDRITE	B	B		6(2)
ALHA81055	4.6	H-6 CHONDRITE	B	A		6(2)
ALHA81056	1.4	H-4 CHONDRITE	B	A		6(2)
ALHA81057	8.4	H-4 CHONDRITE	B	A		6(2)
ALHA81058	66.2	H-4 CHONDRITE	C	C		6(2)
ALHA81059	539.5	MESOSIDERITE	C	B/C	26,49	6(1)
ALHA81060	28.3	L-3 CHONDRITE	C	B		6(2)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter
ALHA81061	23.7	L-3 CHONDRITE	B/C	A	6(2)
ALHA81062	0.5	H-5 CHONDRITE	C	A	6(2)
ALHA81063	4.9	H-5 CHONDRITE	B/C	B	6(2)
ALHA81064	191.0	H-5 CHONDRITE	C	A/B	6(2)
ALHA81065	13.1	L-3 CHONDRITE	B/C	B	6(2)
ALHA81066	8.7	L-3 CHONDRITE	C	B	6(2)
ALHA81067	227.6	H-5 CHONDRITE	C	B	26,23 6(1)
ALHA81068	23.7	H-4 CHONDRITE	B	A	6(2)
ALHA81069	7.2	L-3 CHONDRITE	B/C	A	6(2)
ALHA81070	3.7	H-5 CHONDRITE	B/C	A	6(2)
ALHA81071	2.5	H-5 CHONDRITE	B	A	6(2)
ALHA81072	3.2	H-5 CHONDRITE	B/C	A	6(2)
ALHA81073	3.3	H-4 CHONDRITE	B/C	A	6(2)
ALHA81074	8.0	H-4 CHONDRITE	B	B	6(2)
ALHA81075	15.7	H-5 CHONDRITE	B	A	6(2)
ALHA81076	10.3	H-6 CHONDRITE	B	A	6(2)
ALHA81077	4.2	H-5 CHONDRITE	B	A	6(2)
ALHA81078	5.9	H-6 CHONDRITE	B/C	B	6(2)
ALHA81079	7.5	H-6 CHONDRITE	C	A	6(2)
ALHA81080	16.7	H-5 CHONDRITE	A/B	A	6(2)
ALHA81081	5.0	H-5 CHONDRITE	B	A	6(2)
ALHA81082	5.9	H-5 CHONDRITE	B	A	6(2)
ALHA81083	6.6	H-5 CHONDRITE	B	A	6(2)
ALHA81084	15.7	H-5 CHONDRITE	B	A	6(2)
ALHA81085	16.2	L-3 CHONDRITE	C	B	6(2)
ALHA81086	5.7	H-6 CHONDRITE	B	B	6(2)
ALHA81087	8.4	L-3 CHONDRITE	B/C	B	6(2)
ALHA81088	3.8	H-5 CHONDRITE	B	A	6(2)
ALHA81089	11.2	H-5 CHONDRITE	B	A	6(2)
ALHA81090	9.5	H-5 CHONDRITE	B	A	6(2)
ALHA81091	12.2	H-5 CHONDRITE	B	B	6(2)
ALHA81092	15.6	H-4 CHONDRITE	B	A	6(2)
ALHA81093	271.0	H-6 CHONDRITE	A/B	A/B	26,23 6(1)
ALHA81094	152.0	H-6 CHONDRITE	C	B	6(2)
ALHA81095	58.8	H-4 CHONDRITE	B/C	C	6(2)
ALHA81096	83.0	H-6 CHONDRITE	B	B	6(2)
ALHA81097	79.9	H-4 CHONDRITE	B	A	6(2)
ALHA81098	70.9	MESOSIDERITE	C	B/C	26,49 6(2)
ALHA81099	151.6	L-6 CHONDRITE	A/B	A	6(2)
ALHA81100	154.6	H-5 CHONDRITE	B	A	6(2)
ALHA81101	119.2	UREILITE	A/B	B	26,23 6(2)
ALHA81102	196.0	H-6 CHONDRITE	B/C	A/B	26,23 6(1)
ALHA81103	136.1	H-6 CHONDRITE	B/C	B/C	6(2)
ALHA81104	183.8	H-4 CHONDRITE	C	C	6(2)
ALHA81105	92.7	H-4 CHONDRITE	C	B/C	6(2)
ALHA81106	48.3	L-6 CHONDRITE	B	B	6(2)
ALHA81107	139.6	L-6 CHONDRITE	B	A	6(2)
ALHA81108	69.1	H-5 CHONDRITE	B	B	6(2)
ALHA81109	1.1	H-4 CHONDRITE	B	A	6(2)
ALHA81110	3.0	H-5 CHONDRITE	B/C	A	6(2)
ALHA81111	210.3	H-6 CHONDRITE	B/C	B	26,23 6(1)
ALHA81112	150.3	H-6 CHONDRITE	B/C	A	6(2)
ALHA81113	111.1	H-5 CHONDRITE	B/C	C	6(2)
ALHA81114	79.3	H-4 CHONDRITE	B/C	B/C	6(2)
ALHA81115	154.9	H-5 CHONDRITE	C	A/B	6(2)
ALHA81116	1.7	H-5 CHONDRITE	B	A	6(2)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter
ALHA81117	32.9	H-4 CHONDRITE	B	B/C	6(2)
ALHA81118	84.7	H-5 CHONDRITE	B/C	A	6(2)
ALHA81119	107.4	L-4 CHONDRITE	B	B	6(2)
ALHA81120	13.8	H-5 CHONDRITE	B/C	B	6(2)
ALHA81121	88.4	L-3 CHONDRITE	B	B	6(2)
ALHA81122	20.9	L-6 CHONDRITE	B	B	6(2)
ALHA81123	2.0	LL-6 CHONDRITE	B	A	6(2)
ALHA81124	9.3	H-5 CHONDRITE	B	A	6(2)
ALHA81125	10.2	H-5 CHONDRITE	B	A	6(2)
ALHA81126	21.5	H-5 CHONDRITE	B	A	6(2)
ALHA81127	15.4	H-6 CHONDRITE	B/C	B	6(2)
ALHA81128	15.9	H-5 CHONDRITE	B/C	A	7(1)
ALHA81129	31.6	H-5 CHONDRITE	A/B	A	7(1)
ALHA81130	29.9	H-5 CHONDRITE	B	B	7(1)
ALHA81131	12.9	L-6 CHONDRITE	A/B	B	7(1)
ALHA81132	5.4	H-5 CHONDRITE	B	A	7(1)
ALHA81133	20.7	H-5 CHONDRITE	B	A	7(1)
ALHA81134	15.4	H-6 CHONDRITE	B/C	B	7(1)
ALHA81135	9.5	H-5 CHONDRITE	B	A	7(1)
ALHA81136	1.2	H-5 CHONDRITE	B	A/B	6(2)
ALHA81137	9.4	H-6 CHONDRITE	B/C	A/B	7(1)
ALHA81138	4.3	H-5 CHONDRITE	B	A	7(1)
ALHA81139	7.1	H-5 CHONDRITE	B/C	B	7(1)
ALHA81140	14.4	H-4 CHONDRITE	B/C	A	7(1)
ALHA81141	1.5	H-5 CHONDRITE	B/C	B	7(1)
ALHA81142	1.2	H-4 CHONDRITE	B/C	B/C	7(1)
ALHA81143	12.5	H-5 CHONDRITE	B/C	A	7(1)
ALHA81144	3.0	H-5 CHONDRITE	B	A	7(1)
ALHA81145	21.1	L-3 CHONDRITE	B	B	7(1)
ALHA81146	23.8	H-6 CHONDRITE	C	B	7(1)
ALHA81147	1.7	H-4 CHONDRITE	B	A	7(1)
ALHA81148	13.3	H-5 CHONDRITE	B	A	7(1)
ALHA81149	8.8	H-4 CHONDRITE	B	B	7(1)
ALHA81150	1.9	L-6 CHONDRITE	C	A	7(1)
ALHA81151	5.1	LL-5 CHONDRITE	B/C	A	7(1)
ALHA81152	10.3	H-5 CHONDRITE	B	A	7(1)
ALHA81153	4.2	L-5 CHONDRITE	B	A	6(2)
ALHA81154	1.1	H-6 CHONDRITE	B	B	6(2)
ALHA81155	4.5	H-5 CHONDRITE	A/B	A	7(1)
ALHA81156	19.7	L-3 CHONDRITE	B/C	B/C	7(1)
ALHA81157	11.8	H-4 CHONDRITE	B/C	B	7(1)
ALHA81158	2.4	H-5 CHONDRITE	B/C	A	6(2)
ALHA81159	10.3	L-6 CHONDRITE	B/C	A	7(1)
ALHA81160	11.7	H-6 CHONDRITE	C	B	7(1)
ALHA81161	122.2	H-5 CHONDRITE	C	C	7(1)
ALHA81162	59.4	L-3 CHONDRITE	C	C	7(1)
ALHA81163	82.2	H-5 CHONDRITE	C	B/C	7(1)
ALHA81164	20.1	H-5 CHONDRITE	B	A	7(1)
ALHA81165	6.3	H-5 CHONDRITE	B	A	7(1)
ALHA81166	26.3	H-5 CHONDRITE	B	A	7(1)
ALHA81167	58.5	L-6 CHONDRITE	B/C	B	7(1)
ALHA81168	8.2	H-5 CHONDRITE	C	B	7(1)
ALHA81169	5.6	H-5 CHONDRITE	B	B	7(1)
ALHA81170	59.0	H-5 CHONDRITE	B	A/B	7(1)
ALHA81171	23.7	H-5 CHONDRITE	B/C	B	7(1)
ALHA81172	33.4	L-6 CHONDRITE	C	B	7(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter
ALHA81173	25.8	H-5 CHONDRITE	A/B	A	7(1)
ALHA81174	33.3	H CHONDRITE	B	B/C	7(1)
ALHA81175	13.2	H-5 CHONDRITE	A/B	B	7(1)
ALHA81176	94.5	H-5 CHONDRITE	B	A	7(1)
ALHA81177	17.3	H-4 CHONDRITE	B/C	B	7(1)
ALHA81178	29.9	H-5 CHONDRITE	B/C	B/C	7(1)
ALHA81179	13.7	H-5 CHONDRITE	B	A	7(1)
ALHA81180	16.6	H-6 CHONDRITE	C	B	7(2)
ALHA81181	15.0	L-6 CHONDRITE	B	A	7(2)
ALHA81182	4.6	H-5 CHONDRITE	B	A/B	7(2)
ALHA81183	104.2	H-5 CHONDRITE	C	B/C	7(2)
ALHA81184	16.7	L-4 CHONDRITE	A/B	A	7(2)
ALHA81185	64.9	LL-6 CHONDRITE	A/B	A/B	7(2)
ALHA81186	22.7	H-5 CHONDRITE	B	A/B	7(2)
ALHA81187	40.0	ACHON. (UNIQUE)	B/C	B	7(2)
ALHA81188	8.7	H-5 CHONDRITE	A/B	A	7(2)
ALHA81189	2.6	E-4 CHONDRITE	C	B	7(2)
ALHA81190	48.3	L-3 CHONDRITE	C	A/B	7(2)
ALHA81191	30.4	L-3 CHONDRITE	C	B/C	7(2)
ALHA81192	8.9	H-5 CHONDRITE	A/B	A	7(2)
ALHA81193	13.4	H-6 CHONDRITE	B	A	7(2)
ALHA81194	17.0	H-5 CHONDRITE	B	B	7(2)
ALHA81195	4.9	H-5 CHONDRITE	B	A/B	7(2)
ALHA81196	9.4	H-6 CHONDRITE	B	A	7(2)
ALHA81197	67.7	H-5 CHONDRITE	B/C	B/C	7(2)
ALHA81198	0.5	L-5 CHONDRITE	B/C	A	7(2)
ALHA81199	16.0	H-4 CHONDRITE	C	B	7(2)
ALHA81200	9.5	H-4 CHONDRITE	B/C	A	7(2)
ALHA81201	6.5	H-5 CHONDRITE	B/C	A	7(2)
ALHA81202	5.4	H-5 CHONDRITE	C	A	7(2)
ALHA81203	3.8	L-6 CHONDRITE	C	A	7(2)
ALHA81204	7.3	H-6 CHONDRITE	B	A	7(2)
ALHA81205	2.8	L-6 CHONDRITE	B	A	7(2)
ALHA81206	3.8	H-4 CHONDRITE	B/C	A	7(2)
ALHA81207	14.1	H-5 CHONDRITE	C	B	7(2)
ALHA81208	1.6	DIAGENITE/MESOSIDERITE	C	B	7(2)
ALHA81209	13.9	H-5 CHONDRITE	B/C	A	7(2)
ALHA81210	0.6	H-6 CHONDRITE	B	A	8(1)
ALHA81211	7.2	H-5 CHONDRITE	B	A	8(1)
ALHA81212	11.5	H-4 CHONDRITE	B/C	B	8(1)
ALHA81213	2.9	H-5 CHONDRITE	B/C	A	7(2)
ALHA81214	4.4	L-3 CHONDRITE	B/C	A	7(2)
ALHA81215	11.2	H-5 CHONDRITE	A	A	7(2)
ALHA81216	2.4	H-5 CHONDRITE	C	A	8(1)
ALHA81217	5.4	L-6 CHONDRITE	C	B/C	7(2)
ALHA81218	5.5	H-5 CHONDRITE	C	B	7(2)
ALHA81219	24.4	H-5 CHONDRITE	B	A	8(1)
ALHA81220	3.5	H-5 CHONDRITE	B/C	A/B	8(1)
ALHA81221	9.2	L-6 CHONDRITE	C	A/B	8(1)
ALHA81223	9.5	H-6 CHONDRITE	A/B	A	8(1)
ALHA81224	13.6	H-6 CHONDRITE	B/C	A	8(1)
ALHA81225	13.9	H-6 CHONDRITE	B	A	8(1)
ALHA81226	2.9	H-5 CHONDRITE	C	A	8(1)
ALHA81227	11.3	H-5 CHONDRITE	B	B	8(1)
ALHA81228	7.7	H-5 CHONDRITE	B/C	A	8(1)
ALHA81229	40.0	L-3 CHONDRITE	C	B/C	8(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter
ALHA81230	12.5	H-5 CHONDRITE	B	B	8(1)
ALHA81231	9.2	H-4 CHONDRITE	B/C	B	8(1)
ALHA81232	4.6	H-5 CHONDRITE	B	A/B	8(1)
ALHA81233	25.0	H-5 CHONDRITE	C	B/C	8(1)
ALHA81234	4.7	H-4 CHONDRITE	C	A	8(1)
ALHA81235	6.7	L-6 CHONDRITE	C	B	8(1)
ALHA81236	40.9	H-5 CHONDRITE	A/B	A/B	8(1)
ALHA81237	26.9	H-5 CHONDRITE	B	B	8(1)
ALHA81238	24.1	H-5 CHONDRITE	C	B	8(1)
ALHA81239	31.6	H-5 CHONDRITE	B	B	8(1)
ALHA81240	41.3	H-5 CHONDRITE	C	C	8(1)
ALHA81241	34.2	H-5 CHONDRITE	B	A/B	8(1)
ALHA81242	19.9	H-5 CHONDRITE	B/C	A	8(1)
ALHA81243	15.0	L-3 CHONDRITE	C	B	8(1)
ALHA81244	4.6	H-5 CHONDRITE	B	A	8(1)
ALHA81245	3.8	H-5 CHONDRITE	B/C	A/B	8(1)
ALHA81246	3.4	H-5 CHONDRITE	C	A	8(1)
ALHA81247	104.2	L-6 CHONDRITE	A/B	B	8(1)
ALHA81248	4.9	H-6 CHONDRITE	C	A/B	8(1)
ALHA81249	10.4	H-5 CHONDRITE	B/C	A	8(1)
ALHA81250	16.9	H-6 CHONDRITE	B	B	8(1)
ALHA81251	158.0	LL-3 CHONDRITE	B/C	B	26, 23 6(1)
ALHA81252	2.1	H-5 CHONDRITE	B	A	8(1)
ALHA81253	10.2	H-6 CHONDRITE	A/B	B	8(1)
ALHA81254	8.6	H-6 CHONDRITE	C	A	8(1)
ALHA81255	11.5	H-5 CHONDRITE	B	B	8(1)
ALHA81256	28.5	H-5 CHONDRITE	C	A	8(1)
ALHA81257	28.7	L-6 CHONDRITE	B	A	8(1)
ALHA81258	1.1	CARBONACEOUS C3V	B	A/B	8(1)
ALHA81259	9.9	L-3 CHONDRITE	C	B	8(1)
ALHA81260	124.1	E-6 CHONDRITE	A/B	A/B	8(1)
ALHA81261	11.8	H(?) CHONDRITE	A/B	A	8(1)
ALHA81262	55.5	L-6 CHONDRITE	A/B	B	8(1)
ALHA81263	6.0	H-5 CHONDRITE	B	B	8(1)
ALHA81265	7.5	H-5 CHONDRITE	B/C	A	8(1)
ALHA81266	12.3	L-6 CHONDRITE	A/B	B	8(1)
ALHA81267	26.8	H-4 CHONDRITE	C	B/C	8(1)
ALHA81268	17.9	H-6 CHONDRITE	C	B/C	8(1)
ALHA81269	4.7	H-5 CHONDRITE	B/C	A	8(1)
ALHA81270	3.8	H-5 CHONDRITE	C	A/B	8(1)
ALHA81271	27.6	H-6 CHONDRITE	B	B	8(1)
ALHA81272	22.9	L-3 CHONDRITE	C	B	8(1)
ALHA81273	42.8	H-6 CHONDRITE	C	B/C	8(1)
ALHA81274	18.5	H-5 CHONDRITE	A/B	A	8(1)
ALHA81275	11.1	H-5 CHONDRITE	B	A	8(1)
ALHA81276	42.3	H-5 CHONDRITE	C	B	8(1)
ALHA81277	6.6	H-5 CHONDRITE	B	A	8(1)
ALHA81278	1.1	L-6 CHONDRITE	B	A	8(1)
ALHA81279	27.1	H-4 CHONDRITE	C	B/C	8(1)
ALHA81280	54.9	L-3 CHONDRITE	C	B	8(1)
ALHA81281	45.6	H-5 CHONDRITE	B	B	8(1)
ALHA81282	31.1	L-6 CHONDRITE	A/B	A	8(1)
ALHA81283	0.6	H-5 CHONDRITE	B/C	A	8(1)
ALHA81284	9.9	H-5 CHONDRITE	B/C	A	8(1)
ALHA81285	20.0	LL-6 CHONDRITE	C	A	8(1)

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ALHA81286	27.9	H-5 CHONDRITE	B	B	8(1)
ALHA81287	77.6	H-5 CHONDRITE	C	B/C	8(1)
ALHA81288	19.8	H-6 CHONDRITE	B	A	8(1)
ALHA81289	4.2	L-6 CHONDRITE	A	A	8(1)
ALHA81290	1.5	H-4 CHONDRITE	B	A	8(1)
ALHA81291	3.9	H-6 CHONDRITE	B	A	8(1)
ALHA81292	12.9	L-3 CHONDRITE	C	A/B	8(1)
ALHA81293	2.0	H-5 CHONDRITE	B	A/B	8(1)
ALHA81294	8.6	H-5 CHONDRITE	B	A	8(1)
ALHA81295	105.1	H-5 CHONDRITE	C	B/C	8(1)
ALHA81296	12.7	H-5 CHONDRITE	B/C	B	8(1)
ALHA81297	20.1	H-5 CHONDRITE	B	A	8(1)
ALHA81298	16.2	H-6 CHONDRITE	B	B	8(1)
ALHA81299	0.5	L-3 CHONDRITE	C	A/B	8(1)
ALHA81300	10.3	H-5 CHONDRITE	A/B	A	8(1)
ALHA81301	12.5	H-5 CHONDRITE	B/C	A	8(1)
ALHA81302	4.2	H-5 CHONDRITE	B/C	A	8(1)
ALHA81303	3.7	H-6 CHONDRITE	B/C	A	8(1)
ALHA81304	42.1	L-6 CHONDRITE	A/B	B	8(1)
ALHA81305	1.1	H-5 CHONDRITE	B/C	A	8(1)
ALHA81306	7.1	H-5 CHONDRITE	B	A	8(1)
ALHA81307	56.9	L-6 CHONDRITE	B	B/C	8(1)
ALHA81308	18.7	H-5 CHONDRITE	B/C	B	8(1)
ALHA81309	0.6	H-4 CHONDRITE	C	A	8(1)
ALHA81310	0.7	H-6 CHONDRITE	B	A	8(1)
ALHA81311	0.9	L-6 CHONDRITE	B	A	8(1)
ALHA81312	0.7	CARBONACEOUS C2	A	A	7(1)
ALHA81313	0.5	SHERGOTTITE (?)			8(1)
ALHA81314	2.9	H-5 CHONDRITE	B	A	8(1)
ALHA81315	2.5	H(?) CHONDRITE	A/B	A	8(1)
ALHA81316	0.7	LL-4 CHONDRITE	B	B	9(1)
ALHA81317	0.4	H-6 CHONDRITE	C	A	9(1)
ALH 82100	24.3	CARBONACEOUS C2	A	A	6(2)
ALH 82101	29.1	CARBONACEOUS C30	A	A/B	7(1)
ALH 82102	48.1	H-5 CHONDRITE (IN ICE)	B/C	A	6(2)
ALH 82103	2529.2	H-5 CHONDRITE	B	B	7(1)
ALH 82104	398.8	L-5 CHONDRITE	A	A/B	7(1)
ALH 82105	363.3	L-6 CHONDRITE	A/B	A	7(1)
ALH 82106	35.1	UREILITE	B	A	7(2)
ALH 82107	9.2	L-5 CHONDRITE	B/C	A	7(2)
ALH 82108	13.5	H-5 CHONDRITE	B/C	A	7(2)
ALH 82109	47.2	H-5 CHONDRITE	B/C	A/B	7(2)
ALH 82110	39.3	H-3 CHONDRITE	B/C	B	7(2)
ALH 82111	63.0	L-6 CHONDRITE	A/B	A	7(2)
ALH 82112	28.3	H-5 CHONDRITE	C	A	7(2)
ALH 82113	61.2	H-6 CHONDRITE	A/B	A	7(2)
ALH 82114	40.7	H-5 CHONDRITE	A/B	A	7(2)
ALH 82115	48.5	H-5 CHONDRITE	A/B	A	7(2)
ALH 82116	18.4	H-6 CHONDRITE	B	B	7(2)
ALH 82117	4.2	L-5 CHONDRITE	B	B	7(2)
ALH 82118	110.9	L-6 CHONDRITE	A/B	B	7(2)
ALH 82119	23.9	H-5 CHONDRITE	B/C	B	7(2)

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ALH 82120	7.2	H-5 CHONDRITE	B	A	7(2)
ALH 82121	2.4	L-6 CHONDRITE	A	B	7(2)
ALH 82122	142.0	H-5 CHONDRITE	B	A	7(2)
ALH 82123	110.8	L-6 CHONDRITE	B	A	7(2)
ALH 82124	25.8	H-6 CHONDRITE	C	A/B	7(2)
ALH 82125	178.4	L-6 CHONDRITE	C	B	7(2)
ALH 82126	139.9	H-4 CHONDRITE	B/C	A	7(2)
ALH 82127	5.1	H-6 CHONDRITE	A/B	A	7(2)
ALH 82128	15.2	H-4 CHONDRITE	B/C	A	7(2)
ALH 82129	14.1	H-5 CHONDRITE	B/C	A	7(2)
ALH 82130	44.6	UREILITE	B	A	7(2)
ALH 82131	1.0	CARBONACEOUS C2	A	B	7(2)
ALH 82132	5.9	E-4 CHONDRITE	C	B/C	7(2)
ALH 82133	19.7	H-4 CHONDRITE	B/C	A/B	7(2)
ALH 82134	28.2	H-5 CHONDRITE	B/C	A	7(2)
ALH 82135	12.1	CARBONACEOUS C4	A	A	7(2)
ALH 82136	4.3	H-4 CHONDRITE	B	B	7(2)
ALH 82137	10.8	L-5 CHONDRITE	B	A	7(2)
ALH 82138	5.0	H-6 CHONDRITE	B	A/B	7(2)
ALH 82139	0.2	L-6 CHONDRITE	B	A	7(2)
ALH 82140	0.3	L-6 CHONDRITE	C	A	7(2)
ALH 82141	0.6	H-5 CHONDRITE	C	A	7(2)
ALH 82142	20.0	L-6 CHONDRITE	C	B/C	7(2)
ALH 82143	3.5	H-6 CHONDRITE	C	A/B	7(2)
ALH 82144	7.3	H-5 CHONDRITE	B	A	7(2)
ALH 83001	1568.6	L-4 CHONDRITE	B	A	8(1)
ALH 83002	367.1	L-5 CHONDRITE	B	A	9(2)
ALH 83003	321.8	H-5 CHONDRITE	A/B	A	9(2)
ALH 83004	813.9	L-6 CHONDRITE	B	A	9(2)
ALH 83005	227.9	H-5 CHONDRITE	C	B	9(2)
ALH 83006	230.2	H-5 CHONDRITE	B/C	C	9(2)
ALH 83007	285.0	L-3 CHONDRITE	B	A	9(1)
ALH 83008	272.0	L-3 CHONDRITE	B	A	9(1)
ALH 83009	1.7	AUBRITE	A/B	A	8(1)
ALH 83010	395.2	L-3 CHONDRITE	B	A	8(1)
ALH 83011	213.3	L-5 CHONDRITE	C	B	9(1)
ALH 83013	246.3	H-6 CHONDRITE	A/B	A	9(1)
ALH 83014	1.3	UREILITE	B	A	8(1)
ALH 83015	3.1	AUBRITE (?)	A/B	A	8(1)
ALH 83016	4.1	CARBONACEOUS C2	A/B	B/C	8(1)
ALH 83046	32.9	H-5 CHONDRITE	A/B	A	9(3)
ALH 83047	20.0	H-5 CHONDRITE	B/C	A	9(3)
ALH 83048	2.3	L-5 CHONDRITE	B/C	A	9(3)
ALH 83049	6.1	H-5 CHONDRITE	B	B	9(3)
ALH 83050	9.7	H-6 CHONDRITE	A/B	B	9(3)
ALH 83051	16.5	H-5 CHONDRITE	A/B	A	9(3)
ALH 83052	52.8	L-6 CHONDRITE	C	B	9(3)
ALH 83053	63.2	H-5 CHONDRITE	C	C	9(3)
ALH 83067	95.8	L-6 CHONDRITE	A/B	A	9(1)
ALH 83069	78.2	L-5 CHONDRITE	A	A	9(1)
ALH 83070	215.7	LL-6 CHONDRITE	A	A	9(1)
ALH 83100	3019.0	CARBONACEOUS C2	B	B/C	7(1)
ALH 83101	639.2	L-6 CHONDRITE	A	A	8(1)
ALH 83102	1786.2	CARBONACEOUS C2	B/C	C	8(1)
ALH 83106	22.3	CARBONACEOUS C2	A	A/B	9(1)
ALH 83108	1519.4	CARBONACEOUS C30	A	A	9(1)

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ALH 84001	1930.9	DIOGENITE	A/B	B	8(2)
ALH 84002	7554.0	L-6 CHONDRITE	B	A/B	9(2)
ALH 84003	3088.7	H-5 CHONDRITE	A/B	A	9(2)
ALH 84004	9000.0	H-4 CHONDRITE	B	B	8(2)
ALH 84005	12000.0	L-5 CHONDRITE	A/B	A	9(1)
ALH 84006	16000.0	H-4,5 CHONDRITE	B/C	B	8(2)
ALH 84007	705.6	AUBRITE	A	A/B	8(2)
ALH 84008	301.6	AUBRITE	A/B	A	8(2)
ALH 84009	335.6	AUBRITE	A	A	9(2)
ALH 84010	303.0	AUBRITE	A	B	9(2)
ALH 84011	138.2	AUBRITE	A	A/B	8(2)
ALH 84012	224.7	AUBRITE	A	A	9(2)
ALH 84013	159.9	AUBRITE	A/B	A/B	9(2)
ALH 84014	49.4	AUBRITE	A/B	A/B	9(2)
ALH 84015	263.9	AUBRITE	A	B	9(2)
ALH 84016	149.7	AUBRITE	A	A	9(2)
ALH 84017	79.8	AUBRITE	A	B/C	9(2)
ALH 84018	81.7	AUBRITE	A	B	9(2)
ALH 84019	93.2	AUBRITE	A	A/B	9(2)
ALH 84020	191.1	AUBRITE	A/B	A	9(2)
ALH 84021	35.7	AUBRITE	A	C	9(2)
ALH 84022	12.5	AUBRITE	A	A	9(2)
ALH 84023	262.4	AUBRITE	A	A	9(2)
ALH 84024	194.4	AUBRITE	A	A	9(2)
ALH 84025	4.6	ACHON. (UNIQUE)	A/B	A	8(2)
ALH 84027	8.0	LL-7(?) CHONDRITE	B	B	8(2)
ALH 84028	735.9	CARBONACEOUS C3V	A	A	8(2)
ALH 84029	119.8	CARBONACEOUS C2	A	B	8(2)
ALH 84030	6.2	CARBONACEOUS C2	A	B/C	8(2)
ALH 84031	12.5	CARBONACEOUS C2	A	B	8(2)
ALH 84032	7.9	CARBONACEOUS C2	A	A	8(2)
ALH 84033	60.4	CARBONACEOUS C2	A	B	8(2)
ALH 84034	44.1	CARBONACEOUS C2	A	A	8(2)
ALH 84035	3.2	CARBONACEOUS C2	A	A	9(2)
ALH 84036	2.8	CARBONACEOUS C2	A	A	9(2)
ALH 84037	3.0	CARBONACEOUS C3V	B	A	9(2)
ALH 84038	12.3	CARBONACEOUS C4	A	A	9(2)
ALH 84039	32.8	CARBONACEOUS C2	A/B	A	9(2)
ALH 84040	28.7	CARBONACEOUS C2	A	B	9(2)
ALH 84041	1.3	CARBONACEOUS C2	A	B	9(2)
ALH 84042	51.3	CARBONACEOUS C2	A	B	8(2)
ALH 84043	16.8	CARBONACEOUS C2	A	B	9(2)
ALH 84044	147.4	CARBONACEOUS C2	A	B	8(2)
ALH 84045	11.4	CARBONACEOUS C2	A	A/B	9(2)
ALH 84046	1.5	CARBONACEOUS C2	A	A	9(2)
ALH 84047	4.4	CARBONACEOUS C2	A/B	B	9(2)
ALH 84048	12.6	CARBONACEOUS C2	A	B	9(2)
ALH 84049	29.4	CARBONACEOUS C2	A	B	9(2)
ALH 84050	3.2	CARBONACEOUS C2	A	B	9(2)
ALH 84051	34.3	CARBONACEOUS C2	A/B	B	9(2)
ALH 84052	10.5	LL-6 CHONDRITE	A/B	A	9(2)
ALH 84053	5.2	CARBONACEOUS C2	A	A	9(2)
ALH 84054	19.4	CARBONACEOUS C2	A	A	9(2)
ALH 84055	6900.5	H-5 CHONDRITE	B	B	9(1)
ALH 84056	2140.3	L-6 CHONDRITE	B	A/B	9(1)
ALH 84057	368.2	L-6 CHONDRITE	B/C	A	9(1)

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ALH 84058	2002.5	L-6 CHONDRITE	B	A	9(1)
ALH 84059	856.9	H-4 CHONDRITE	B/C	B	9(1)
ALH 84060	338.9	H-5 CHONDRITE	B	A	9(1)
ALH 84061	676.4	L-6 CHONDRITE	B	A	9(1)
ALH 84062	958.2	L-6 CHONDRITE	A/B	A	9(1)
ALH 84063	759.6	L-5 CHONDRITE	A/B	A	9(1)
ALH 84064	1889.1	H-5 CHONDRITE	B	A	9(1)
ALH 84065	1641.7	L-6 CHONDRITE	A/B	A	9(2)
ALH 84066	355.8	L-6 CHONDRITE	B	A	9(1)
ALH 84067	391.2	H-5 CHONDRITE	C	B/C	9(1)
ALH 84068	1114.1	H-5 CHONDRITE	B	A	9(1)
ALH 84069	1136.3	H-5 CHONDRITE	A	A	9(2)
ALH 84070	3951.7	L-6 CHONDRITE	A/B	A	9(1)
ALH 84071	797.7	H-6 CHONDRITE	B	B	9(1)
ALH 84072	720.9	L-6 CHONDRITE	B	A	9(1)
ALH 84073	630.6	H-5 CHONDRITE	B	A	9(3)
ALH 84074	757.5	H-5 CHONDRITE	A/B	B	9(3)
ALH 84075	788.6	H-5 CHONDRITE	C	B/C	9(3)
ALH 84076	368.7	H-5 CHONDRITE	B/C	A	9(3)
ALH 84077	276.4	H-5 CHONDRITE	B	A	9(3)
ALH 84078	283.3	H-5 CHONDRITE	B/C	A	9(3)
ALH 84079	749.6	L-6 CHONDRITE	A/B	A	9(3)
ALH 84080	286.8	L-6 CHONDRITE	B	A	9(3)
ALH 84081	612.3	LL-6 CHONDRITE	A	B	9(3)
ALH 84082	556.6	H-6 CHONDRITE	C	A	9(3)
ALH 84083	419.7	H-6 CHONDRITE	B/C	B/C	9(3)
ALH 84084	331.8	H-4 CHONDRITE	B	A	9(3)
ALH 84085	554.2	H-5 CHONDRITE	B/C	B/C	9(3)
ALH 84086	234.0	LL-3 CHONDRITE	A/B	A	9(3)
ALH 84087	314.6	L-6 CHONDRITE	A/B	A	9(3)
ALH 84088	297.5	H-5 CHONDRITE	B	A	9(3)
ALH 84089	303.8	H-5 CHONDRITE	B/C	A	9(3)
ALH 84090	201.8	L-6 CHONDRITE	C	A	9(3)
ALH 84091	214.6	H-5 CHONDRITE	B/C	A	9(3)
ALH 84092	213.9	L-6 CHONDRITE	A/B	B	9(3)
ALH 84093	113.5	H-6 CHONDRITE	B	B	9(3)
ALH 84094	207.6	H-5 CHONDRITE	C	B	9(3)
ALH 84095	276.8	L-6 CHONDRITE	A/B	A	9(3)
ALH 84096	293.6	CARBONACEOUS C4	A/B	A	9(3)
ALH 84097	388.7	L-6 CHONDRITE	B	A	9(3)
ALH 84098	260.5	H-5 CHONDRITE	B/C	A	9(3)
ALH 84099	150.3	H-5 CHONDRITE	B/C	B	9(3)
ALH 84100	110.3	H-5 CHONDRITE	B	A	9(3)
ALH 84107	134.1	LL-6 CHONDRITE	A	B	9(3)
ALH 84111	131.5	H-5 CHONDRITE	B	A/B	9(3)
ALH 84116	56.2	LL-6 CHONDRITE	B	A	9(3)
ALH 84117	71.8	H-5 CHONDRITE	B	A	9(3)
ALH 84119	33.8	LL-6 CHONDRITE	A	A	9(3)
ALH 84126	41.2	LL-3 CHONDRITE	B	B	9(3)
ALH 84131	107.9	H-5 CHONDRITE	C	B/C	9(3)
ALH 84135	31.3	H-5 CHONDRITE	B/C	A	9(3)
ALH 84136	83.5	UREILITE	B	A/B	9(3)
ALH 84137	145.4	H-5 CHONDRITE	B/C	C	9(3)
ALH 84138	20.2	H-5 CHONDRITE	B	A	9(3)
ALH 84139	157.1	H-5 CHONDRITE	A	A	9(3)
ALH 84147	54.2	H-6 CHONDRITE	C	A	9(3)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
ALH 84151	112.4	H-6 CHONDRITE	B	A		9(3)
ALH 84153	242.9	H-6 CHONDRITE	B/C	A		9(3)
ALH 84157	88.6	H-5 CHONDRITE	B/C	A		9(3)
ALH 84165	94.7	IRON-OCTAHEDRITE				9(1)
ALH 84167	150.7	H-5 CHONDRITE	C	B		9(3)
ALH 84168	14.2	LL-6 CHONDRITE	B	A		9(3)
ALH 84170	39.2	E-3 CHONDRITE	B	A		9(3)
ALH 84177	7.3	L-5 CHONDRITE	B	B		9(3)
ALH 84178	0.4	H-5 CHONDRITE	B	A		9(3)
ALH 84184	42.1	H-5 CHONDRITE	B	B		9(3)
ALH 84185	4.8	H-5 CHONDRITE	C	A		9(3)
ALH 84188	3.1	E-4 CHONDRITE	C	B		9(3)
ALH 84191	14.0	CARBONACEOUS C2	A	B		9(3)
ALH 84198	5.4	LL-6 CHONDRITE	A/B	A		9(3)
ALH 84206	15.1	E-4 CHONDRITE	A/B	A		9(3)
ALH 84216	5.5	H-5 CHONDRITE	B/C	A/B		9(3)
ALH 84227	12.1	H-5 CHONDRITE	C	B/C		9(3)
ALH 84230	2.4	H-4 CHONDRITE	B	A		9(3)
ALH 84236	32.3	H-5 CHONDRITE	B	B		9(3)
ALH 84245	18.9	H-5 CHONDRITE	B	A		9(3)
ALH 84250	10.0	E-4 CHONDRITE	B	A		9(3)
ALH 84252	3.1	H-6 CHONDRITE	B/C	A		9(3)
ALH 84254	2.0	E-4 CHONDRITE	B	A		9(3)
ALH 84255	11.3	LL-6 CHONDRITE	A	A		9(3)
ALH 84262	15.3	H-6 CHONDRITE	C	B		9(3)
ALH 84264	137.6	L-6 CHONDRITE	A	A		9(3)
ALH 85001	212.3	EUCRITE	A/B	A/B		9(3)
ALH 85002	437.7	CARBONACEOUS C4	A	A		9(3)
ALH 85005	18.9	CARBONACEOUS C2	A	A		9(3)
ALH 85006	49.0	CARBONACEOUS C3V	A	A		9(3)
ALH 85007	82.0	CARBONACEOUS C2	B	B		9(3)
ALH 85008	32.1	CARBONACEOUS C2	B	A/B		9(3)
ALH 85009	46.6	CARBONACEOUS C2	A	B		9(3)
ALH 85013	130.4	CARBONACEOUS C2	A	A/B		9(3)
ALH 85014	75.0	L-6 CHONDRITE	A	A		9(3)
ALH 85015	3.2	DIOGENITE	A	A		9(3)
BTNA78001	160.7	L-6 CHONDRITE	B	B	24, 19	3(2)
						4(1)
BTNA78002	4301.0	L-6 CHONDRITE	B	A	24, 19	3(1)
						4(1)
BTNA78004	1079.0	LL-6 CHON. (BRECCIATED)	B	A	24, 19	3(1)
						4(1)
BTNA78005	81.8	H-6 CHONDRITE	B	B		9(2)
DOM 85500	59.8	H-5 CHONDRITE	B	A/B		9(3)
DRPA78001	15200.0	IRON-GROUP IIB				2(1)
						4(1)
DRPA78002	7188.0	IRON-GROUP IIB			24, 19	2(1)
						4(1)
DRPA78003	144.2	IRON-GROUP IIB				2(1)
						4(1)
DRPA78004	133.6	IRON-GROUP IIB			24, 19	2(1)
						4(1)
DRPA78005	18600.0	IRON-GROUP IIB			24, 19	2(1)
						4(1)
DRPA78006	389.3	IRON-GROUP IIB			24, 19	2(1)
						4(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
DRPA78007	11800.0	IRON-GROUP IIB				2(1) 3(1) 4(1)
DRPA78008	59400.0	IRON-GROUP IIB			24,19	2(1) 3(1) 4(1)
DRPA78009	138100.0	IRON-GROUP IIB			24,19	2(1) 4(1)
EETA79001	7942.0	SHERGOTTITE	A	A	24,19	3(3) 4(1) 9(1)
EETA79002	2843.0	DIOGENITE	B	B	24,19	3(3) 4(1)
EETA79003	435.6	L-6 CHONDRITE	B	B	24,19	4(1)
EETA79004	390.3	EUCRITE	B	B	24,19	3(3) 4(1)
EETA79005	450.9	EUCRITE (POLYMICT)	A	B	24,19	3(3) 4(1)
EETA79006	716.4	HOWARDITE	B	B	24,19	3(3) 4(1) 4(2)
EETA79007	199.9	H-5 CHONDRITE	B	B	24,19	4(1)
EETA79009	140.3	L-5 CHONDRITE	B	B	24,19	4(1)
EETA79010	287.3	L-6 CHONDRITE	B	C	24,19	4(1)
EETA79011	86.4	EUCRITE (POLYMICT)	B	B	24,19	3(3) 4(1)
EET 82600	247.1	HOWARDITE	A	B		6(2) 7(1)
EET 82601	149.5	L-3 CHONDRITE	B/C	A		7(2)
EET 82602	1824.1	H-4 CHONDRITE	B	B		7(1)
EET 82603	8210.0	H-5 CHONDRITE	B	A		7(1)
EET 82604	1570.6	H-5 CHONDRITE	B/C	B		7(1)
EET 82605	624.6	L-6 CHONDRITE	B	A		7(1)
EET 82606	981.9	L-6 CHONDRITE	B	B		7(1)
EET 82607	165.3	L-6 CHONDRITE	B/C	A		7(1)
EET 82608	94.5	LL-6 CHONDRITE	A/B	A		7(2)
EET 82609	325.5	H-4 CHONDRITE	B/C	A/B		7(1)
EET 82610	42.1	H-6 CHONDRITE	B	A		7(2)
EET 82611	12.6	L-4 CHONDRITE	B	B		7(2)
EET 82612	31.6	L-6 CHONDRITE	A	A		7(2)
EET 82613	4.2	L-4 CHONDRITE	B	A		7(2)
EET 82614	8.4	H-5 CHONDRITE	A/B	A		7(2)
EET 82615	29.3	H-6 CHONDRITE	B	A		7(2)
EET 82616	2.1	H-4 CHONDRITE	B/C	A		7(2)
EET 83200	778.8	H-5 CHONDRITE	B/C	B		8(1)
EET 83201	1059.8	H-6 CHONDRITE	B/C	A		8(1)
EET 83202	1213.2	L-6 CHONDRITE	A/B	B		8(1)
EET 83203	545.6	H-5 CHONDRITE	B/C	B/C		8(1)
EET 83204	376.6	LL-6 CHONDRITE	A	A		8(1)
EET 83205	470.8	L-6 CHONDRITE	A/B	B		8(1)
EET 83206	461.9	L-6 CHONDRITE	B	A		8(1)
EET 83207	1238.3	H-4 CHONDRITE	B	B		8(1)
EET 83208	263.0	H-5 CHONDRITE	B/C	B		8(1)
EET 83209	520.0	L-6 CHONDRITE	B/C	A		8(1)
EET 83210	425.6	L-6 CHONDRITE	A/B	B		8(1)
EET 83211	542.7	H-4 CHONDRITE	B/C	B/C		8(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter
EET 83212	402.1	EUCRITE (POLYMICT)	B	B	8(1)
EET 83213	2727.0	L-3 CHONDRITE	B	A	8(1)
EET 83214	1397.5	L-6 CHONDRITE	B	A	8(1)
EET 83215	510.4	H-6 CHONDRITE	B/C	C	8(1)
EET 83216	789.9	L-6 CHONDRITE	B	A	9(1)
EET 83217	374.7	L-6 CHONDRITE	B	B	9(1)
EET 83218	191.9	L-6 CHONDRITE	B	A	9(1)
EET 83219	243.3	L-6 CHONDRITE	B	A	9(1)
EET 83220	330.9	L-6 CHONDRITE	B	A	9(1)
EET 83221	313.9	H-4,6 CHONDRITE	C	C	9(1)
EET 83222	317.0	L-6 CHONDRITE	B	B	9(1)
EET 83223	218.6	H-5 CHONDRITE	B	B	9(1)
EET 83224	8.6	CARBONACEOUS C2	A/B	B	8(1)
EET 83225	44.0	UREILITE	B/C	B	8(1)
EET 83226	33.1	CARBONACEOUS C2	A/B	B	8(1)
EET 83227	1973.0	EUCRITE (POLYMICT)	B	B	8(1)
EET 83228	1206.0	EUCRITE (POLYMICT)	B	B	8(1)
EET 83229	312.9	EUCRITE (POLYMICT)	B	B	8(1)
EET 83230	530.0	IRON-ATAXITE			7(2)
EET 83231	66.4	EUCRITE (POLYMICT)	B	A/C	8(1)
EET 83232	211.2	EUCRITE (POLYMICT)	B	A/B	8(1)
EET 83234	180.6	EUCRITE (POLYMICT)	B	B	8(1)
EET 83235	254.6	BASALTIC ACHON.	B	B	8(1)
EET 83236	6.4	EUCRITE	B	A	8(1)
EET 83237	882.7	L-6 CHONDRITE	B	A/B	8(1)
EET 83238	382.1	L-6 CHONDRITE	A	A/B	9(1)
EET 83239	282.3	L-6 CHONDRITE	C	A/B	9(1)
EET 83240	247.8	L-5 CHONDRITE	B	A/B	9(2)
EET 83241	203.3	L-6 CHONDRITE	B	A/B	9(1)
EET 83242	282.1	L-5 CHONDRITE	B	B	9(1)
EET 83243	288.1	L-6 CHONDRITE	A	A	9(1)
EET 83244	384.1	L-6 CHONDRITE	B	A	9(1)
EET 83245	59.0	IRON-OCTAHEDRITE			7(2)
EET 83246	48.3	DIOGENITE	A/B	A/B	8(1)
EET 83247	22.5	DIOGENITE	B/C	B	8(1)
EET 83248	39.2	H-3 CHONDRITE	B	A	9(1)
EET 83250	11.5	CARBONACEOUS C2	B	C	8(1)
EET 83251	261.4	EUCRITE (POLYMICT)	B	A/B	8(1)
EET 83252	183.7	L-6 CHONDRITE	B/C	A	9(1)
EET 83253	44.1	L-6 CHONDRITE	B	A	9(1)
EET 83260	15.4	L-3 CHONDRITE	B/C	A	9(2)
EET 83262	23.9	H-5 CHONDRITE	A	A	9(2)
EET 83267	27.7	H-3 CHONDRITE	B	C	9(2)
EET 83269	8.5	L-5 CHONDRITE	A/B	A/B	9(2)
EET 83271	67.3	L-6 CHONDRITE	A/B	A	9(2)
EET 83274	82.7	L-3 CHONDRITE	B	A	9(2)
EET 83276	48.9	L-6 CHONDRITE	B	B	9(2)
EET 83283	57.3	EUCRITE (POLYMICT)	B	B	8(1)
EET 83285	3.2	H-5 CHONDRITE	B	B	9(1)
EET 83289	7.8	L-6 CHONDRITE	B	B	9(1)
EET 83290	1.4	LL-6 CHONDRITE	B	A	9(1)
EET 83292	9.3	H-5 CHONDRITE	B/C	B	9(1)
EET 83295	27.9	H-6 CHONDRITE	B	A/B	9(1)
EET 83303	11.8	H-5 CHONDRITE	B/C	A	9(1)
EET 83305	167.0	H-5 CHONDRITE	B	B/C	9(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
EET 83307	4.8	E-4 CHONDRITE	C	B		9(1)
EET 83308	136.9	L-5 CHONDRITE	B	A		9(1)
EET 83309	60.8	ACHON. (UNIQUE)	C	B		9(1)
EET 83312	93.0	L-6 CHONDRITE	B	B		9(1)
EET 83318	54.9	L-4 CHONDRITE	A/B	A		9(1)
EET 83322	14.3	E-4 CHONDRITE	A/B	B		9(1)
EET 83324	142.8	H-5 CHONDRITE	B/C	B		9(1)
EET 83329	67.7	L-4 CHONDRITE	B	A		9(1)
EET 83333	188.6	IRON-OCTAHEDRITE				9(1)
EET 83335	226.9	L-6 CHONDRITE	A/B	A		9(1)
EET 83348	299.2	L-6 CHONDRITE	A/B	A		9(1)
EET 83363	184.7	L-6 CHONDRITE	B	A/B		9(3)
EET 83364	204.9	L-6 CHONDRITE	A/B	A		9(3)
EET 83376	79.3	HOWARDITE	A/B	A/B		9(2)
EET 83390	15.2	IRON-OCTAHEDRITE				9(1)
EET 83399	203.3	L-3 CHONDRITE	C	A		9(1)
EET 84300	72.2	IRON-OCTAHEDRITE				9(1)
EET 84301	75.1	L-6 CHONDRITE	B	B		9(3)
EET 84302	59.6	ACHONDRITE	B/C	B		9(3)
EET 84303	57.5	H-5 CHONDRITE	C	A		9(3)
EET 84304	152.2	L-6 CHONDRITE	B	A		9(3)
EET 84305	9.8	LL-6 CHONDRITE	A/B	B		9(3)
EET 84306	3.5	H-6 CHONDRITE	C	A/B		9(3)
EET 84307	5.1	L-6 CHONDRITE	C	A		9(3)
EET 84308	9.3	L-6 CHONDRITE	B	A		9(3)
GRO 85200	3821.6	H-5 CHONDRITE	B/C	A		9(3)
GRO 85202	27.2	CARBONACEOUS C2	A/B	C		9(3)
ILD 83500	2523.0	IRON-ATAHITE				7(2)
LEW 85300	210.3	EUCRITE	A/B	A		9(3)
LEW 85302	114.5	EUCRITE	A/B	A/B		9(3)
LEW 85303	408.0	EUCRITE	A/B	A		9(3)
LEW 85305	40.8	EUCRITE	A	A		9(3)
LEW 85306	6.5	CARBONACEOUS C2	A	A		9(3)
LEW 85309	54.1	CARBONACEOUS C2	A/B	B/C		9(3)
LEW 85311	199.5	CARBONACEOUS C2	B	B/C		9(3)
LEW 85312	31.7	CARBONACEOUS C2	B	B/C		9(3)
LEW 85313	191.2	DIOGENITE	B	B		9(3)
LEW 85317	8.7	L-4 CHONDRITE	A/B	A		9(3)
LEW 85320	110224.0	H-5 CHONDRITE	B	B		9(3)
MBRA76001	1096.0	H-6 CHONDRITE	B	B	23,12	1(3) 4(1)
MBRA76002	13773.0	H-6 CHONDRITE	B	B		3(1)
META78001	624.4	H-4 CHONDRITE	B/C	B	24,19	4(1)
META78002	542.2	L-6 CHONDRITE	B	A	24,19	3(1) 4(1)
META78003	1726.0	L-6 CHONDRITE	B	B	24,19	3(2) 4(1)
META78004 %	30.3	L-6 CHONDRITE	B	A		9(2)
META78005	172.0	L-6 CHONDRITE	B	B	24,19	3(2) 4(1)
META78006	409.6	H-6 CHONDRITE	C	B	24,19	3(1) 4(1)
META78007	174.8	H-6 CHONDRITE	B/C	B	24,19	3(1) 3(3) 4(1)

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META78008	125.5	UREILITE	B	B	3(1)
META78009 %	28.8	H-5 CHONDRITE	B	A	9(2)
META78010	233.5	H-5 CHONDRITE	B	A	9(2)
					24,19
META78011	115.7	H-5 CHONDRITE	C	A	3(2)
META78012	86.3	H-5 CHONDRITE	B	B	4(1)
					9(2)
META78013 %	131.9	H-6 CHONDRITE	B	B	9(2)
META78014 %	100.5	H-6 CHONDRITE	C	A	3(1)
					9(2)
META78015 %	36.8	L-5 CHONDRITE	B	A	3(1)
					9(2)
META78016 %	114.1	H-6 CHONDRITE	B/C	B	3(1)
					9(2)
META78017	46.9	H-6 CHONDRITE	B/C	A	9(2)
META78018 %	81.9	H-5 CHONDRITE	B	A	9(2)
META78019 %	91.1	H-6 CHONDRITE	A/B	B	9(2)
META78020	63.7	H-6 CHONDRITE	C	A	9(2)
META78021 %	22.6	L-6 CHONDRITE	B/C	B	9(2)
META78022 %	48.5	H-6 CHONDRITE	B/C	A	9(2)
META78023	55.6	H-6 CHONDRITE	B	A	9(2)
META78024 %	22.2	H-6 CHONDRITE	B/C	B	9(2)
META78025 %	58.2	H-6 CHONDRITE	C	B/C	9(2)
META78026	75.2	H-6 CHONDRITE	C	A	9(2)
META78027	52.5	H-6 CHONDRITE	B	B	9(2)
META78028	20657.0	L-6 CHONDRITE	B	B	3(1)
					3(2)
					4(1)
OTTA80301	35.5	H-3 CHONDRITE	B/C	B	5(1)
PCA 82500	90.9	CARBONACEOUS C4	B	C	6(2)
					7(1)
					7(2)
PCA 82501	54.4	EUCRITE (UNBRECCIATED)	A	A	6(2)
					7(1)
PCA 82502	890.4	EUCRITE (UNBRECCIATED)	A	A	6(2)
					7(1)
PCA 82503	8308.0	L-6 CHONDRITE	A	B	7(1)
PCA 82504	3093.6	L-5 CHONDRITE	A/B	B	7(1)
PCA 82505	3085.5	L-5 CHONDRITE	B	B	7(1)
PCA 82506	5316.0	UREILITE	A/B	A	7(1)
PCA 82507	479.8	LL-6 CHONDRITE	A	A/B	7(1)
PCA 82508	389.3	L-6 CHONDRITE	A/B	B	7(1)
PCA 82509	285.6	L-6 CHONDRITE	B	A	7(1)
PCA 82510	254.2	L-5 CHONDRITE	A	A	7(1)
PCA 82511	149.0	H-4 CHONDRITE	B	B	7(2)
PCA 82512	55.2	H-6 CHONDRITE	B	A	7(2)
PCA 82513	239.1	L-5 CHONDRITE	A/B	A	7(1)
PCA 82514	129.8	L-4 CHONDRITE	B	A	7(2)
PCA 82515	6.9	H-4 CHONDRITE	B	A/B	7(2)
PCA 82516	16.0	H-6 CHONDRITE	B/C	B	7(2)
PCA 82517	41.3	H-5 CHONDRITE	B/C	B	7(2)
PCA 82518	21.9	E-4 CHONDRITE	B	A	7(2)
PCA 82519	125.0	L-5 CHONDRITE	B	A	7(2)
PCA 82520	22.7	H-3 CHONDRITE	B/C	A/B	7(2)
PCA 82521	1.4	H-5 CHONDRITE	C	A	7(2)

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PCA 82522	45.5	H-5 CHONDRITE	B/C	B	7(2)
PCA 82523	11.5	H-6 CHONDRITE	A	B	7(2)
PCA 82524	113.8	H-4 CHONDRITE	A/B	B	7(2)
PCA 82525	40.2	L-6 CHONDRITE	B	B	7(2)
PCA 82526	24.9	H-6 CHONDRITE	B	A	7(2)
PCA 82527	3.4	H-6 CHONDRITE	A	A	7(2)
PCA 82528	51.4	L-6 CHONDRITE	B/C	B	7(2)
PGPA77006	19068.0	IRON-GROUP IA			24, 49 3(2)
					23, 12 4(1)
RKPA78001	234.9	L-6 CHONDRITE	C	B	24, 19 3(1)
					4(1)
RKPA78002	8483.0	H-4 CHONDRITE	B	A/B	24, 19 3(2)
					4(1)
RKPA78003	1276.0	L-6 CHONDRITE	C	B	24, 19 3(1)
					4(1)
RKPA78004	166.9	H-4 CHONDRITE	A	A	24, 19 3(1)
					4(1)
RKPA78005 %	28.7	H-5 CHONDRITE	B	B	9(2)
RKPA79001	3006.0	L-6 CHONDRITE	B	C	24, 19 4(1)
RKPA79002	203.6	L-6 CHONDRITE	B	B	24, 19 4(1)
RKPA79003	182.2	H-6 CHONDRITE	B	A	24, 19 4(1)
RKPA79004	370.9	H-5 CHONDRITE	B/C	B	24, 19 4(1)
RKPA79008	73.0	L-3 CHONDRITE	B	B	24, 19 4(1)
RKPA79009	54.7	H-6 CHONDRITE	C	B	24, 19 4(1)
RKPA79012	12.8	H-6 CHONDRITE	B	B	24, 19 4(1)
RKPA79013	11.0	L-5 CHONDRITE	B/C	B	24, 19 4(1)
RKPA79014	77.7	H-5 CHONDRITE	B/C	B	24, 19 4(1)
RKPA79015	10022.0	MESOSIDERITE	A/B	A	26, 49 3(3)
					4(1)
RKPA80201	813.0	H-6 CHONDRITE	B	A	26, 23 4(2)
					5(1)
RKPA80202	544.5	L-6 CHONDRITE	B	A	26, 23 4(2)
					5(1)
RKPA80203	3.8	H-6 CHONDRITE	C	A	5(1)
RKPA80204	15.5	EUCRITE	A	A	26, 23 4(2)
					5(1)
RKPA80205	53.8	H-3 CHONDRITE	B	B	26, 23 5(1)
RKPA80206	46.6	H-6 CHONDRITE	C	B	5(1)
RKPA80207	17.7	L-3 CHONDRITE	C	B	26, 23 5(1)
RKPA80208	10.2	H-6 CHONDRITE	B	A	5(1)
RKPA80209	9.7	L-5 CHONDRITE	C	B	26, 23 5(1)
RKPA80210	10.6	H-5 CHONDRITE	B/C	B	5(1)
RKPA80211	2.1	H-6 CHONDRITE	C	B	5(1)
RKPA80213	19.1	H-6 CHONDRITE	B/C	B	5(1)
RKPA80214	4.9	H-6 CHONDRITE	C	B	5(1)
RKPA80215	9.0	L-6 CHONDRITE	C	B	26, 23 5(1)
RKPA80216	44.3	L-4 CHONDRITE	B	B	26, 23 5(1)
RKPA80217	7.8	H-5 CHONDRITE	C	A	5(1)
RKPA80218	6.7	H-5 CHONDRITE	C	A	5(1)
RKPA80219	21.5	L-6 CHONDRITE	B	A	5(1)
RKPA80220	124.5	H-5 CHONDRITE	B/C	B/C	26, 23 5(1)
RKPA80221	51.9	H-6 CHONDRITE	C	B/C	5(1)
RKPA80222	7.0	LL-6 CHONDRITE	B	B	26, 23 5(1)
RKPA80223	25.1	H-5 CHONDRITE	C	B	26, 23 5(1)
RKPA80224	8.0	EUCRITE (UNBRECCIATED)	A/B	A	26, 23 4(2)
					5(1)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter	
RKPA80225	8.3	L-6 CHONDRITE	C	A		5(1)
RKPA80226	160.3	IRON-OCTAHEDRITE			26,49	5(1)
RKPA80227	7.7	H-5 CHONDRITE	B/C	A		5(1)
RKPA80228	11.1	L-5 CHONDRITE	C	B	26,23	5(1)
RKPA80229	14.1	MESOSIDERITE	C	B/C	26,49	5(1)
RKPA80230	58.2	H-5 CHONDRITE	B	B		5(1)
RKPA80231	238.1	H-6 CHONDRITE	C	B/C	26,23	4(2)
						5(1)
RKPA80232	80.1	H-4 CHONDRITE	B	A	26,23	5(1)
RKPA80233	413.5	H-5 CHONDRITE	B/C	B	26,23	4(2)
						5(1)
RKPA80234	136.2	LL-5 CHONDRITE	B	B	26,23	5(1)
RKPA80235	261.2	LL-6 CHONDRITE	A/B	B	26,23	4(2)
						5(1)
RKPA80236	15.6	H-5 CHONDRITE	B/C	B		5(1)
RKPA80237	22.2	H-4 CHONDRITE	C	B	26,23	5(1)
RKPA80238	18.4	LL-6 CHONDRITE	A/B	A	26,23	5(1)
RKPA80239	5.6	UREILITE	B	B	26,23	5(1)
RKPA80240	61.4	H-5 CHONDRITE	C	A		5(1)
RKPA80241	0.6	CARBONACEOUS C3V	B	B	26,23	5(1)
RKPA80242	7.3	L-4 CHONDRITE	B/C	B	26,23	5(1)
RKPA80243	3.4	H-5 CHONDRITE	C	A		5(1)
RKPA80244	14.2	H-5 CHONDRITE	C	B		5(1)
RKPA80245	36.7	H-5 CHONDRITE	B/C	B		5(1)
RKPA80246	5.8	MESOSIDERITE	C	C	26,49	5(1)
RKPA80247	1.1	H-5 CHONDRITE	C	B		5(1)
RKPA80248	11.3	LL-6 CHONDRITE	A/B	A	26,23	5(1)
RKPA80249	9.7	H-5 CHONDRITE	B/C	A		5(1)
RKPA80250	3.9	H-5 CHONDRITE	B/C	A	26,23	5(1)
RKPA80251	29.1	H-5 CHONDRITE	B	B	26,23	5(1)
RKPA80252	11.2	L-6 CHONDRITE	A/B	A		5(1)
RKPA80253	4.6	LL-5 CHONDRITE	A/B	A	26,23	5(1)
RKPA80254	68.5	H-6 CHONDRITE	C	B/C		5(1)
RKPA80255	6.7	H-6 CHONDRITE	C	B		5(1)
RKPA80256	153.2	L-3 CHONDRITE	B	A	26,23	4(2)
						5(1)
RKPA80257	8.5	H-5 CHONDRITE	B/C	B		5(1)
RKPA80258	4.3	MESOSIDERITE	B/C	B	26,49	5(1)
RKPA80259	20.2	E-5 CHONDRITE	B/C	B	26,23	5(1)
RKPA80260	7.5	H-5 CHONDRITE	C	B		5(1)
RKPA80261	61.6	L-6 CHONDRITE	B	A		5(1)
RKPA80262	32.1	H-6 CHONDRITE	C	B		5(1)
RKPA80263	16.7	MESOSIDERITE	C	B	26,49	5(1)
RKPA80264	23.9	L-6 CHONDRITE	B	B		5(1)
RKPA80265	7.8	H-6 CHONDRITE	C	B		5(1)
RKPA80266	9.8	H-6 CHONDRITE	B/C	B		5(1)
RKPA80267	24.2	H-4 CHONDRITE	C	A	26,23	5(1)
RKPA80268	3.4	L-5 CHONDRITE	B/C	B	26,23	5(1)
TIL 82400	220.8	L-5 CHONDRITE	A/B	B		7(1)
TIL 82401	281.6	L-6 CHONDRITE	A/B	A		7(1)
TIL 82402	476.0	LL-6 CHONDRITE	A/B	A		7(1)
TIL 82403	49.8	EUCRITE (BRECCIATED)	A	A		6(2)
						7(1)
TIL 82404	321.6	L-4 CHONDRITE	B	B		7(1)
TIL 82405	1115.7	H-6 CHONDRITE	B	A		7(1)
TIL 82406	152.0	L-4 CHONDRITE	B	A		7(2)

Sample Number	Weight (g)	Classification	Weathering	Fracturing	Smithsonian Newsletter
TIL 82407	220.8	L-4 CHONDRITE	B/C	A	7(1)
TIL 82408	80.1	LL-3 CHONDRITE	B	A/B	7(2)
TIL 82409	230.9	H-5 CHONDRITE	B	A	7(1)
TIL 82410	18.8	DIOGENITE	A	B	7(2)
TIL 82411	179.5	L-4 CHONDRITE	A/B	A	7(1)
TIL 82412	35.2	H-5 CHONDRITE	C	B	7(2)
TIL 82413	18.4	H-5 CHONDRITE	C	B	7(2)
TIL 82414	15.4	H-5 CHONDRITE	B	A	7(2)
TIL 82415	70.2	H-5 CHONDRITE	A/B	A	7(2)
TYR 82700	892.1	L-4 CHONDRITE	B	A	7(1)

Table 2.

Comprehensive Listing of Meteorites of Special Petrologic Types

Achondrites

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALHA81187	40.0	ACHON. (UNIQUE)	B/C	B	4	6.5
ALH 84025	4.6	ACHON. (UNIQUE)	A/B	A	32-33	11
EET 83309	60.8	ACHON. (UNIQUE)	C	B	11-21	4-14
EET 84302	59.6	ACHONDRITE	B/C	B	5	8
ALHA81005	31.4	ANORTHOSITIC BRECCIA	A/B	A	11-40	7-47
ALHA78113	298.6	AUBRITE	A/B	A		
ALH 83009	1.7	AUBRITE	A/B	A		
ALH 84007	705.6	AUBRITE	A	A/B		
ALH 84008	301.6	AUBRITE	A/B	A		
ALH 84009	335.6	AUBRITE	A	A	0	0
ALH 84010	303.0	AUBRITE	A	B	0	0
ALH 84011	138.2	AUBRITE	A	A/B		
ALH 84012	224.7	AUBRITE	A	A	0	0
ALH 84013	159.9	AUBRITE	A/B	A/B	0	0
ALH 84014	49.4	AUBRITE	A/B	A/B	0	0
ALH 84015	263.9	AUBRITE	A	B	0	0
ALH 84016	149.7	AUBRITE	A	A	0	0
ALH 84017	79.8	AUBRITE	A	B/C	0	0
ALH 84018	81.7	AUBRITE	A	B	0	0
ALH 84019	93.2	AUBRITE	A	A/B	0	0
ALH 84020	191.1	AUBRITE	A/B	A	0	0
ALH 84021	35.7	AUBRITE	A	C	0	0
ALH 84022	12.5	AUBRITE	A	A	0	0
ALH 84023	262.4	AUBRITE	A	A	0	0
ALH 84024	194.4	AUBRITE	A	A	0	0
ALH 83015	3.1	AUBRITE (?)	A/B	A		
EET 83235	254.6	BASALTIC ACHON.	B	B		
ALHA77256	676.2	DIOGENITE	A/B	A		23
ALH 84001	1930.9	DIOGENITE	A/B	B		27
ALH 85015	3.2	DIOGENITE	A	A	39	25
EETA79002	2843.0	DIOGENITE	B	B	24-25	22
EET 83246	48.3	DIOGENITE	A/B	A/B		
EET 83247	22.5	DIOGENITE	B/C	B		
LEW 85313	191.2	DIOGENITE	B	B		28-35
TIL 82410	18.8	DIOGENITE	A	B		24
ALHA81208	1.6	DIOGENITE/MESOSIDERITE	C	B		25
ALHA81009	229.0	EUCRITE	A	A		30-63
ALHA81012	36.7	EUCRITE	A/B	A		33-62
ALH 85001	212.3	EUCRITE	A/B	A/B		32
EETA79004	390.3	EUCRITE	B	B		30-61

Sample Number	Weight (g)	Classification	Weathering	Fracturing % Fa	% Fs
EET 83236	6.4	EUCRITE	B	A	
LEW 85300	210.3	EUCRITE	A/B	A	32-63
LEW 85302	114.5	EUCRITE	A/B	A/B	24-59
LEW 85303	408.0	EUCRITE	A/B	A	30-62
LEW 85305	40.8	EUCRITE	A	A	31-57
RKPA80204	15.5	EUCRITE	A	A	52-57
ALHA81001	52.9	EUCRITE (ANOMALOUS)	A	B	59
TIL 82403	49.8	EUCRITE (BRECCIATED)	A	A	43-58
ALHA76005	317.3	EUCRITE (POLYMICT)	A	A	37-57
ALHA77302	235.5	EUCRITE (POLYMICT)	A	A	37-64
ALHA78040	211.7	EUCRITE (POLYMICT)	A	A	33-52
ALHA78132	656.0	EUCRITE (POLYMICT)	A	A	40-68
ALHA78158	15.1	EUCRITE (POLYMICT)	A	A	40-68
ALHA78165	20.9	EUCRITE (POLYMICT)	A	A	37-61
ALHA79017	310.0	EUCRITE (POLYMICT)	A	A	28-53
ALHA80102	471.2	EUCRITE (POLYMICT)	A	B	34-52
ALHA81006	254.9	EUCRITE (POLYMICT)	A	A/B	35-60
ALHA81007	163.5	EUCRITE (POLYMICT)	A/B	A	38-55
ALHA81008	43.8	EUCRITE (POLYMICT)	A/B	A/B	32-59
ALHA81010	219.1	EUCRITE (POLYMICT)	A	A	31-57
EETA79005	450.9	EUCRITE (POLYMICT)	A	B	30-61
EETA79011	86.4	EUCRITE (POLYMICT)	B	B	30-61
EET 83212	402.1	EUCRITE (POLYMICT)	B	B	
EET 83227	1973.0	EUCRITE (POLYMICT)	B	B	
EET 83228	1206.0	EUCRITE (POLYMICT)	B	B	
EET 83229	312.9	EUCRITE (POLYMICT)	B	B	
EET 83231	66.4	EUCRITE (POLYMICT)	B	A/C	
EET 83232	211.2	EUCRITE (POLYMICT)	B	A/B	
EET 83234	180.6	EUCRITE (POLYMICT)	B	B	
EET 83251	261.4	EUCRITE (POLYMICT)	B	A/B	
EET 83283	57.3	EUCRITE (POLYMICT)	B	B	
PCA 82501	54.4	EUCRITE (UNBRECCIATED)	A	A	41-57
PCA 82502	890.4	EUCRITE (UNBRECCIATED)	A	A	36-61
RKPA80224	8.0	EUCRITE (UNBRECCIATED)	A/B	A	54
ALHA81011	405.7	EUCRITIC BRECCIA	A/B	A	33-60
ALHA78006	8.0	HOWARDITE	A	A	25-61
EETA79006	716.4	HOWARDITE	B	B	19-57
EET 82600	247.1	HOWARDITE	A	B	22-53
EET 83376	79.3	HOWARDITE	A/B	A/B	21-49
ALHA77005	482.5	SHERGOTTITE	A	A	28 23
EETA79001	7942.0	SHERGOTTITE	A	A	23-27 16-67
ALHA81313	0.5	SHERGOTTITE (?)			38
ALHA77257	1995.7	UREILITE	A	B	13 12
ALHA78019	30.3	UREILITE	B/C	C	22 18
ALHA78262	26.2	UREILITE	B/C	A	22 19
ALHA81101	119.2	UREILITE	A/B	B	10-22
ALH 82106	35.1	UREILITE	B	A	3 4

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALH 82130	44.6	UREILITE	B	A	3	4
ALH 83014	1.3	UREILITE	B	A	18	15
ALH 84136	83.5	UREILITE	B	A/B	0-5	4
EET 83225	44.0	UREILITE	B/C	B		
META78008	125.5	UREILITE	B	B	22	13
PCA 82506	5316.0	UREILITE	A/B	A	21	18
RKPA80239	5.6	UREILITE	B	B	16	15

Irons

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALHA81013	17727.0	IRON				
ALHA81014	188.2	IRON				
ALHA80104	882.0	IRON-ATAXITE				
EET 83230	530.0	IRON-ATAXITE				
ILD 83500	2523.0	IRON-ATAXITE				
ALHA77255	765.1	IRON-ATAXITE (ANOM)				
ALHA76002	307.0	IRON-GROUP IA				
ALHA77250	10555.0	IRON-GROUP IA				
ALHA77263	1669.0	IRON-GROUP IA				
ALHA77283	10510.0	IRON-GROUP IA				
ALHA77289	2186.0	IRON-GROUP IA				
ALHA77290	3784.0	IRON-GROUP IA				
PGPA77006	19068.0	IRON-GROUP IA				
ALHA78100	84.9	IRON-GROUP IIA				
DRPA78001	15200.0	IRON-GROUP IIB				
DRPA78002	7188.0	IRON-GROUP IIB				
DRPA78003	144.2	IRON-GROUP IIB				
DRPA78004	133.6	IRON-GROUP IIB				
DRPA78005	18600.0	IRON-GROUP IIB				
DRPA78006	389.3	IRON-GROUP IIB				
DRPA78007	11800.0	IRON-GROUP IIB				
DRPA78008	59400.0	IRON-GROUP IIB				
DRPA78009	138100.0	IRON-GROUP IIB				
ALHA78252	2789.0	IRON-GROUP IVA				
ALH 84165	94.7	IRON-OCTAHEDRITE				
EET 83245	59.0	IRON-OCTAHEDRITE				
EET 83333	188.6	IRON-OCTAHEDRITE				
EET 83390	15.2	IRON-OCTAHEDRITE				
EET 84300	72.2	IRON-OCTAHEDRITE				
RKPA80226	160.3	IRON-OCTAHEDRITE				

Enstatite Chondrites

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALH 84170	39.2	E-3 CHONDRITE	B	A	0.6-28	0.9-17
ALHA81189	2.6	E-4 CHONDRITE	C	B	2	3
ALH 82132	5.9	E-4 CHONDRITE	C	B/C		0.4
ALH 84188	3.1	E-4 CHONDRITE	C	B		0.7-3
ALH 84206	15.1	E-4 CHONDRITE	A/B	A		0.7-6
ALH 84250	10.0	E-4 CHONDRITE	B	A		0.5-4
ALH 84254	2.0	E-4 CHONDRITE	B	A		0.3-4
EET 83307	4.8	E-4 CHONDRITE	C	B	2-5	0.5-5
EET 83322	14.3	E-4 CHONDRITE	A/B	B		0.2-2
PCA 82518	21.9	E-4 CHONDRITE	B	A	0.8	
RKPA80259	20.2	E-5 CHONDRITE	B/C	B		0-1
ALHA81021	695.1	E-6 CHONDRITE	A	B		0-1
ALHA81260	124.1	E-6 CHONDRITE	A/B	A/B		.3
ALHA77156 @	17.7	EH-4 CHONDRITE	B		0.8	1.5
ALHA77295 @	141.3	EH-4 CHONDRITE	B		0.8	1.7

Stony-Irons

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALHA77219	637.1	MESOSIDERITE	B	B	26	24-28
ALHA81059	539.5	MESOSIDERITE	C	B/C	28	25-32
ALHA81098	70.9	MESOSIDERITE	C	B/C		28
RKPA79015	10022.0	MESOSIDERITE	A/B	A		24
RKPA80229	14.1	MESOSIDERITE	C	B/C		24
RKPA80246	5.8	MESOSIDERITE	C	C		24
RKPA80258	4.3	MESOSIDERITE	B/C	B		17-21
RKPA80263	16.7	MESOSIDERITE	C	B		24

Carbonaceous Chondrites

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALHA77306	19.9	CARBONACEOUS C2	A	A	1-45	1
ALHA78261	5.1	CARBONACEOUS C2	A	A	0-50	1-8
ALHA81002	14.0	CARBONACEOUS C2	A	B	0-52	0-2
ALHA81004	4.7	CARBONACEOUS C2	A/B	A	0-52	0-2
ALHA81312	0.7	CARBONACEOUS C2	A	A	1-35	1-31
ALH 82100	24.3	CARBONACEOUS C2	A	A	1-47	1-2
ALH 82131	1.0	CARBONACEOUS C2	A	B	0.3	
ALH 83016	4.1	CARBONACEOUS C2	A/B	B/C	0.3-30	0-1
ALH 83100	3019.0	CARBONACEOUS C2	B	B/C		
ALH 83102	1786.2	CARBONACEOUS C2	B/C	C	0-2	
ALH 83106	22.3	CARBONACEOUS C2	A	A/B	0.2-5	
ALH 84029	119.8	CARBONACEOUS C2	A	B	0-2	
ALH 84030	6.2	CARBONACEOUS C2	A	B/C	0-2	
ALH 84031	12.5	CARBONACEOUS C2	A	B	0-2	
ALH 84032	7.9	CARBONACEOUS C2	A	A	0-2	2
ALH 84033	60.4	CARBONACEOUS C2	A	B	0-1	2
ALH 84034	44.1	CARBONACEOUS C2	A	A	0-2	
ALH 84035	3.2	CARBONACEOUS C2	A	A	0.5-6	0.7-7
ALH 84036	2.8	CARBONACEOUS C2	A	A	0.7-40	2-13
ALH 84039	32.8	CARBONACEOUS C2	A/B	A	0.4-31	.8-1.5
ALH 84040	28.7	CARBONACEOUS C2	A	B		
ALH 84041	1.3	CARBONACEOUS C2	A	B		
ALH 84042	51.3	CARBONACEOUS C2	A	B	0-2	
ALH 84043	16.8	CARBONACEOUS C2	A	B		
ALH 84044	147.4	CARBONACEOUS C2	A	B	0-2	
ALH 84045	11.4	CARBONACEOUS C2	A	A/B		
ALH 84046	1.5	CARBONACEOUS C2	A	A	.3-2.1	.7-1.0
ALH 84047	4.4	CARBONACEOUS C2	A/B	B		
ALH 84048	12.6	CARBONACEOUS C2	A	B		
ALH 84049	29.4	CARBONACEOUS C2	A	B		
ALH 84050	3.2	CARBONACEOUS C2	A	B		
ALH 84051	34.3	CARBONACEOUS C2	A/B	B		
ALH 84053	5.2	CARBONACEOUS C2	A	A	.5-1.5	5
ALH 84054	19.4	CARBONACEOUS C2	A	A	.5-36	3
ALH 84191	14.0	CARBONACEOUS C2	A	B	0.4-.8	0.8-7
ALH 85005	18.9	CARBONACEOUS C2	A	A	0.5-39	.9-2.2
ALH 85007	82.0	CARBONACEOUS C2	B	B	0.3-30	
ALH 85008	32.1	CARBONACEOUS C2	B	A/B	0.3-45	.9-2.5
ALH 85009	46.6	CARBONACEOUS C2	A	B	0.4-59	.8-1.6
ALH 85013	130.4	CARBONACEOUS C2	A	A/B	0.5-36	
EET 83224	8.6	CARBONACEOUS C2	A/B	B	0.2-41	0-1
EET 83226	33.1	CARBONACEOUS C2	A/B	B	0.5-69	0.6-10
EET 83250	11.5	CARBONACEOUS C2	B	C	0.3-22	2-14
GRO 85202	27.2	CARBONACEOUS C2	A/B	C	.8-1.2	
LEW 85306	6.5	CARBONACEOUS C2	A	A	0.2-33	.7-5.5
LEW 85309	54.1	CARBONACEOUS C2	A/B	B/C	0.2-41	.9-1.5
LEW 85311	199.5	CARBONACEOUS C2	B	B/C	0.4-36	.9-1.1
LEW 85312	31.7	CARBONACEOUS C2	B	B/C	0.2-45	.7-1.8
ALHA77307	181.3	CARBONACEOUS C3	A	A	1-30	1-12
ALHA77003	779.6	CARBONACEOUS C30	A	A	4-48	2-25
ALHA77029 @	1.4	CARBONACEOUS C30	A/B		23.0	2.6
ALH 82101	29.1	CARBONACEOUS C30	A	A/B	1-50	1-10

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALH 83108	1519.4	CARBONACEOUS C30	A	A	0.9-38	1-17
ALHA81003	10.1	CARBONACEOUS C3V	A/B	A/B	0-60	1
ALHA81258	1.1	CARBONACEOUS C3V	B	A/B	0-28	0-1
ALH 84028	735.9	CARBONACEOUS C3V	A	A	0-50	2
ALH 84037	3.0	CARBONACEOUS C3V	B	A	0.8-9	0.5-12
ALH 85006	49.0	CARBONACEOUS C3V	A	A	0.3-43	.9-4.9
RKPA80241	0.6	CARBONACEOUS C3V	B	B	1-6	1-8
ALH 82135	12.1	CARBONACEOUS C4	A	A	27	24
ALH 84038	12.3	CARBONACEOUS C4	A	A	25-30	
ALH 84096	293.6	CARBONACEOUS C4	A/B	A	30	22
ALH 85002	437.7	CARBONACEOUS C4	A	A	30	26
PCA 82500	90.9	CARBONACEOUS C4	B	C	31	

Chondrites - Type 3

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALHA77299	260.7	H-3 CHONDRITE	A	A	11-21	15-20
ALHA78170 +	20.9	H-3 CHONDRITE	B		3-36	
ALH 82110	39.3	H-3 CHONDRITE	B/C	B	1-24	4-27
EET 83248	39.2	H-3 CHONDRITE	B	A	3-24	3-23
EET 83267	27.7	H-3 CHONDRITE	B	C	13-23	12-20
OTTA80301	35.5	H-3 CHONDRITE	B/C	B	17-19	4-19
PCA 82520	22.7	H-3 CHONDRITE	B/C	A/B	15-22	2-19
RKPA80205	53.8	H-3 CHONDRITE	B	B	17-20	5-13
ALHA77011	291.5	L-3 CHONDRITE	C	A	4-36	1-33
ALHA77013 @	23.0	L-3 CHONDRITE	B		9-28	1-35
ALHA77015	411.1	L-3 CHONDRITE	C	B	1-21	4-24
ALHA77031 @	0.5	L-3 CHONDRITE	B/C		n.d.	n.d.
ALHA77033	9.3	L-3 CHONDRITE	C	B	8-38	8-9
ALHA77034 @	1.8	L-3 CHONDRITE	B/C		n.d.	n.d.
ALHA77036 @	8.5	L-3 CHONDRITE	B		n.d.	n.d.
ALHA77043 @	11.4	L-3 CHONDRITE	B/C		1-37	1-28
ALHA77047 @	20.5	L-3 CHONDRITE	C		n.d.	n.d.
ALHA77049 @	7.3	L-3 CHONDRITE	B/C		n.d.	n.d.
ALHA77050 @	84.2	L-3 CHONDRITE	B/C		n.d.	n.d.
ALHA77052 @	112.2	L-3 CHONDRITE	B/C		n.d.	n.d.
ALHA77115 @	154.4	L-3 CHONDRITE	B/C		n.d.	n.d.
ALHA77140	78.6	L-3 CHONDRITE	C	B	8-44	2-17
ALHA77160	70.4	L-3 CHONDRITE	C	B	3-46	6-40
ALHA77163 @	24.3	L-3 CHONDRITE	B/C		n.d.	n.d.
ALHA77164	38.1	L-3 CHONDRITE	C	C	6-39	3-41
ALHA77165	30.5	L-3 CHONDRITE	C	C	8-33	6-35
ALHA77166 @	138.8	L-3 CHONDRITE	C		n.d.	n.d.
ALHA77167	611.2	L-3 CHONDRITE	C	B/C	2-41	3-17
ALHA77170 @	12.2	L-3 CHONDRITE	B/C		n.d.	n.d.
ALHA77175 @	23.3	L-3 CHONDRITE	B/C		n.d.	n.d.
ALHA77176 @	55.4	L-3 CHONDRITE	B		0.3-34	1-37
ALHA77178 @	5.7	L-3 CHONDRITE	B/C		1-36	2-40
ALHA77185 @	28.0	L-3 CHONDRITE	A/B		n.d.	n.d.
ALHA77197 @	20.3	L-3 CHONDRITE	A/B		10-27	4-21
ALHA77211 @	26.7	L-3 CHONDRITE	B/C		n.d.	n.d.
ALHA77214	2111.0	L-3 CHONDRITE	C	C	1-49	4-23
ALHA77215	819.6	L-3 CHONDRITE	B	B/C	22-26	9-21
ALHA77216	1470.0	L-3 CHONDRITE	A/B	B/C	15-35	14-23
ALHA77217	413.2	L-3 CHONDRITE	B	B/C	17-25	9-26
ALHA77241 @	144.1	L-3 CHONDRITE	C		n.d.	n.d.
ALHA77244 @	39.5	L-3 CHONDRITE	B/C		n.d.	n.d.
ALHA77249	503.6	L-3 CHONDRITE	C	C	7-35	2-25
ALHA77252	343.1	L-3 CHONDRITE	B	C	22-28	2-22
ALHA77260	744.3	L-3 CHONDRITE	C	C	7-23	1-28
ALHA77303 @	78.6	L-3 CHONDRITE	B/C		n.d.	n.d.
ALHA78013	4.1	L-3 CHONDRITE			11-45	1-31
ALHA78017 +	2.9	L-3 CHONDRITE	B		3-43	
ALHA78037 +	0.5	L-3 CHONDRITE	B		7-38	
ALHA78038	363.0	L-3 CHONDRITE	C	C	4-42	2-19
ALHA78041 +	117.5	L-3 CHONDRITE	B		0-41	
ALHA78046	70.0	L-3 CHONDRITE			8-25	8-20
ALHA78119 +	102.6	L-3 CHONDRITE	A		0-28	
ALHA78133	59.9	L-3 CHONDRITE			1-34	1-16

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALHA78149 +	23.2	L-3 CHONDRITE	B		18-31	
ALHA78162 +	33.2	L-3 CHONDRITE	B		2-30	
ALHA78176 +	8.2	L-3 CHONDRITE	B		8-26	
ALHA78180 +	7.9	L-3 CHONDRITE	B		2-33	
ALHA78186	3.1	L-3 CHONDRITE			3-36	3-24
ALHA78188	0.9	L-3 CHONDRITE	C	B	1-34	5-29
ALHA78235 +	19.2	L-3 CHONDRITE	B		8-28	
ALHA78236	14.4	L-3 CHONDRITE			2-37	3-26
ALHA78238	9.8	L-3 CHONDRITE			2-34	3-21
ALHA78239 +	16.0	L-3 CHONDRITE	B		1-34	
ALHA78243	1.9	L-3 CHONDRITE			1-36	3-30
ALHA79001	32.3	L-3 CHONDRITE	C	A	6-39	2-31
ALHA79045	115.4	L-3 CHONDRITE	C	B	2-38	2-29
ALHA80133	3.6	L-3 CHONDRITE	B	B	1-35	5-30
ALHA81024	797.7	L-3 CHONDRITE	C	B	3-28	2-24
ALHA81025	379.0	L-3 CHONDRITE	C	B	1-41	3-40
ALHA81030	1851.6	L-3 CHONDRITE	B/C	B/C	1-49	5-33
ALHA81031	1594.9	L-3 CHONDRITE	C	B/C	1-43	3-35
ALHA81032	726.8	L-3 CHONDRITE	C	A	0-42	2-14
ALHA81053	2.5	L-3 CHONDRITE	C	B	1-29	1-42
ALHA81060	28.3	L-3 CHONDRITE	C	B	2-28	5-27
ALHA81061	23.7	L-3 CHONDRITE	B/C	A	3-33	5-27
ALHA81065	13.1	L-3 CHONDRITE	B/C	B	10-41	5-24
ALHA81066	8.7	L-3 CHONDRITE	C	B	1-44	1-25
ALHA81069	7.2	L-3 CHONDRITE	B/C	A	4-38	1-31
ALHA81085	16.2	L-3 CHONDRITE	C	B	1-39	2-25
ALHA81087	8.4	L-3 CHONDRITE	B/C	B	2-29	3-31
ALHA81121	88.4	L-3 CHONDRITE	B	B	8-40	1-24
ALHA81145	21.1	L-3 CHONDRITE	B	B	5-40	3-23
ALHA81156	19.7	L-3 CHONDRITE	B/C	B/C	4-42	1-30
ALHA81162	59.4	L-3 CHONDRITE	C	C	1-40	4-20
ALHA81190	48.3	L-3 CHONDRITE	C	A/B	0.3-32	4-28
ALHA81191	30.4	L-3 CHONDRITE	C	B/C	2-29	1-30
ALHA81214	4.4	L-3 CHONDRITE	B/C	A	0.2-38	0.1-45
ALHA81229	40.0	L-3 CHONDRITE	C	B/C	7-32	2-30
ALHA81243	15.0	L-3 CHONDRITE	C	B	5-44	6-31
ALHA81259	9.9	L-3 CHONDRITE	C	B	0-22	0-29
ALHA81272	22.9	L-3 CHONDRITE	C	B	2-36	3-22
ALHA81280	54.9	L-3 CHONDRITE	C	B	1-32	2-24
ALHA81292	12.9	L-3 CHONDRITE	C	A/B	11-34	2-31
ALHA81299	0.5	L-3 CHONDRITE	C	A/B	1-37	2-16
ALH 83007	285.0	L-3 CHONDRITE	B	A	0.5-43	3-37
ALH 83008	272.0	L-3 CHONDRITE	B	A	10-24	5-24
ALH 83010	395.2	L-3 CHONDRITE	B	A	4-31	2-28
EET 82601	149.5	L-3 CHONDRITE	B/C	A	2-39	1-35
EET 83213	2727.0	L-3 CHONDRITE	B	A	13-30	3-26
EET 83260	15.4	L-3 CHONDRITE	B/C	A	7-19	5-25
EET 83274	82.7	L-3 CHONDRITE	B	A	5-28	5-15
EET 83399	203.3	L-3 CHONDRITE	C	A	3-26	6-25
RKPA79008	73.0	L-3 CHONDRITE	B	B	1-29	2-28
RKPA80207	17.7	L-3 CHONDRITE	C	B	15-29	6-28
RKPA80256	153.2	L-3 CHONDRITE	B	A	20-25	10-26
ALHA79022	31.4	L-3,4 CHONDRITE	A/B	B	1-28	9-22
ALHA78015 *	34.9	LL(?L)-3 CHONDRITE			8-35	

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALHA76004	52.5	LL-3 CHONDRITE	A	A	0-34	0-53
ALHA77278	312.9	LL-3 CHONDRITE	A	A	11-29	9-21
ALHA78138 +	10.8	LL-3 CHONDRITE	B		0-35	
ALHA79003	5.1	LL-3 CHONDRITE	B	B	10-38	5-26
ALHA81251	158.0	LL-3 CHONDRITE	B/C	B	1-29	2-28
ALH 84086	234.0	LL-3 CHONDRITE	A/B	A	25-29	17-26
ALH 84126	41.2	LL-3 CHONDRITE	B	B	7-31	3-24
TIL 82408	80.1	LL-3 CHONDRITE	B	A/B	1-29	2-21

Chondrites - Type 4

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALHA77004	2230.0	H-4 CHONDRITE	C	C	17-20	15-27
ALHA77009	235.5	H-4 CHONDRITE	C	A	18	16
ALHA77010	295.8	H-4 CHONDRITE	C	A	18	15-18
ALHA77056 @	12.3	H-4 CHONDRITE	A/B		18.8	16.3
ALHA77190	387.1	H-4 CHONDRITE	C	C	17-19	15-22
ALHA77191	642.2	H-4 CHONDRITE	C	B/C	16-18	14-16
ALHA77192	845.3	H-4 CHONDRITE	C	C	16-18	15-21
ALHA77208	1733.0	H-4 CHONDRITE	C	C	17	14
ALHA77221	229.2	H-4 CHONDRITE	C	A	15	13-15
ALHA77222 @	125.4	H-4 CHONDRITE	A/B		18.0	15.3
ALHA77223	207.9	H-4 CHONDRITE	C	C	17	15-23
ALHA77224	786.9	H-4 CHONDRITE	C	C	19	17
ALHA77225	5878.0	H-4 CHONDRITE	C	C	17	16
ALHA77226	15323.0	H-4 CHONDRITE	C	C	18	16
ALHA77232	6494.3	H-4 CHONDRITE	C	C	17	15
ALHA77233	4087.0	H-4 CHONDRITE	C	B	14-21	15-17
ALHA77262	861.5	H-4 CHONDRITE	B/C	B	15-19	13-16
ALHA77286	245.8	H-4 CHONDRITE	C	B	17	12-16
ALHA78029 +	4.1	H-4 CHONDRITE	B		19.2	
ALHA78033 +	5.0	H-4 CHONDRITE	B		19.2	
ALHA78051	119.5	H-4 CHONDRITE			18	15-18
ALHA78053	179.0	H-4 CHONDRITE	C	B	17	16
ALHA78057	8.7	H-4 CHONDRITE			18	16
ALHA78077	330.6	H-4 CHONDRITE	C	B	19	15-18
ALHA78084	14280.0	H-4 CHONDRITE	B/C	B	18	8-24
ALHA78120	44.3	H-4 CHONDRITE			18	16
ALHA78134	458.3	H-4 CHONDRITE	B/C	B/C	18	15-20
ALHA78140 +	16.6	H-4 CHONDRITE	B		18.4	
ALHA78157 +	63.4	H-4 CHONDRITE	B		19.0	
ALHA78168 +	33.6	H-4 CHONDRITE	B		19.2	
ALHA78172 +	29.4	H-4 CHONDRITE	B		19.7	
ALHA78193	13.3	H-4 CHONDRITE	B/C	A	18	16
ALHA78196	11.2	H-4 CHONDRITE	B/C	B	18	16
ALHA78223	6.5	H-4 CHONDRITE	B	B	18	16
ALHA79023	68.1	H-4 CHONDRITE	B/C	C	17	14-17
ALHA79035	37.6	H-4 CHONDRITE	B	B	17	14-18
ALHA79039	108.3	H-4 CHONDRITE	B	B	16	15
ALHA80106	432.2	H-4 CHONDRITE	C	B	19	16-19
ALHA80121	39.1	H-4 CHONDRITE	B/C	C	19	17
ALHA80128	138.2	H-4 CHONDRITE	B	B/C	18	15-20
ALHA80131	19.8	H-4 CHONDRITE	B	B	19	16-22
ALHA81022	912.5	H-4 CHONDRITE	B/C	A	19	17
ALHA81041	728.8	H-4 CHONDRITE	C	C	18	15-23
ALHA81043	106.0	H-4 CHONDRITE	B/C	C	18	15
ALHA81044	386.8	H-4 CHONDRITE	C	C	18	16
ALHA81045	90.2	H-4 CHONDRITE	C	B/C	18	16
ALHA81046	16.6	H-4 CHONDRITE	C	B/C	18	16
ALHA81047	81.2	H-4 CHONDRITE	B/C	B/C	18	16
ALHA81048	190.6	H-4 CHONDRITE	B/C	B/C	18	16
ALHA81049	8.5	H-4 CHONDRITE	B/C	B	18	16
ALHA81050	25.7	H-4 CHONDRITE	C	C	18	16
ALHA81051	43.0	H-4 CHONDRITE	B/C	B	18	16
ALHA81052	28.7	H-4 CHONDRITE	C	B	18	16
ALHA81056	1.4	H-4 CHONDRITE	B	A	19	17

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALHA81057	8.4	H-4 CHONDRITE	B	A	19	13-21
ALHA81058	66.2	H-4 CHONDRITE	C	C	18	15
ALHA81068	23.7	H-4 CHONDRITE	B	A	19	16
ALHA81073	3.3	H-4 CHONDRITE	B/C	A	19	8-18
ALHA81074	8.0	H-4 CHONDRITE	B	B	19	16
ALHA81092	15.6	H-4 CHONDRITE	B	A	19	17
ALHA81095	58.8	H-4 CHONDRITE	B/C	C	18	16
ALHA81097	79.9	H-4 CHONDRITE	B	A	18	16
ALHA81104	183.8	H-4 CHONDRITE	C	C	19	17
ALHA81105	92.7	H-4 CHONDRITE	C	B/C	18	16
ALHA81109	1.1	H-4 CHONDRITE	B	A	19	17
ALHA81114	79.3	H-4 CHONDRITE	B/C	B/C	18	16
ALHA81117	32.9	H-4 CHONDRITE	B	B/C	18	14-21
ALHA81140	14.4	H-4 CHONDRITE	B/C	A	19	17
ALHA81142	1.2	H-4 CHONDRITE	B/C	B/C	18	16
ALHA81147	1.7	H-4 CHONDRITE	B	A	19	16
ALHA81149	8.8	H-4 CHONDRITE	B	B	19	16
ALHA81157	11.8	H-4 CHONDRITE	B/C	B	19	17
ALHA81177	17.3	H-4 CHONDRITE	B/C	B	19	16
ALHA81199	16.0	H-4 CHONDRITE	C	B	19	16
ALHA81200	9.5	H-4 CHONDRITE	B/C	A	19	17
ALHA81206	3.8	H-4 CHONDRITE	B/C	A	18	15-21
ALHA81212	11.5	H-4 CHONDRITE	B/C	B	18	16
ALHA81231	9.2	H-4 CHONDRITE	B/C	B	19	16
ALHA81234	4.7	H-4 CHONDRITE	C	A	18	16
ALHA81267	26.8	H-4 CHONDRITE	C	B/C	18	15-22
ALHA81279	27.1	H-4 CHONDRITE	C	B/C	17	16
ALHA81290	1.5	H-4 CHONDRITE	B	A	18	17
ALHA81309	0.6	H-4 CHONDRITE	C	A	18	16
ALH 82126	139.9	H-4 CHONDRITE	B/C	A	18	15
ALH 82128	15.2	H-4 CHONDRITE	B/C	A	18	16
ALH 82133	19.7	H-4 CHONDRITE	B/C	A/B	18	16
ALH 82136	4.3	H-4 CHONDRITE	B	B	18	5-20
ALH 84004	9000.0	H-4 CHONDRITE	B	B	17-18	16-19
ALH 84059	856.9	H-4 CHONDRITE	B/C	B	18	16
ALH 84084	331.8	H-4 CHONDRITE	B	A	18	16
ALH 84230	2.4	H-4 CHONDRITE	B	A	18	14-19
EET 82602	1824.1	H-4 CHONDRITE	B	B	19	16
EET 82609	325.5	H-4 CHONDRITE	B/C	A/B	18	17
EET 82616	2.1	H-4 CHONDRITE	B/C	A	18	16
EET 83207	1238.3	H-4 CHONDRITE	B	B	18	16-18
EET 83211	542.7	H-4 CHONDRITE	B/C	B/C	18-20	16-20
META78001	624.4	H-4 CHONDRITE	B/C	B	17	14-21
PCA 82511	149.0	H-4 CHONDRITE	B	B	17	14
PCA 82515	6.9	H-4 CHONDRITE	B	A/B	17	14
PCA 82524	113.8	H-4 CHONDRITE	A/B	B	18	16
RKPA78002	8483.0	H-4 CHONDRITE	B	A/B	18	15
RKPA78004	166.9	H-4 CHONDRITE	A	A	17	14-21
RKPA80232	80.1	H-4 CHONDRITE	B	A	18	16
RKPA80237	22.2	H-4 CHONDRITE	C	B	18	16
RKPA80267	24.2	H-4 CHONDRITE	C	A	19	16
ALH 84006	16000.0	H-4,5 CHONDRITE	B/C	B	18	17-18
EET 83221	313.9	H-4,6 CHONDRITE	C	C	17	15

Sample Number	Weight (g)	Classification	Weathering	Fracturing	% Fa	% Fs
ALHA77230	2473.0	L-4 CHONDRITE	C	B	22-25	18-29
ALHA77304	650.4	L-4 CHONDRITE	B	B	18-27	13-19
ALHA78044	164.1	L-4 CHONDRITE	B/C	B	23-25	19-24
ALHA78070	10.0	L-4 CHONDRITE			23	13-25
ALHA81040	194.5	L-4 CHONDRITE	B/C	A	25	21
ALHA81119	107.4	L-4 CHONDRITE	B	B	24	21
ALHA81184	16.7	L-4 CHONDRITE	A/B	A	24	20
ALH 83001	1568.6	L-4 CHONDRITE	B	A	23-28	20-32
EET 82611	12.6	L-4 CHONDRITE	B	B	24	21
EET 82613	4.2	L-4 CHONDRITE	B	A	24	20
EET 83318	54.9	L-4 CHONDRITE	A/B	A	23	19
EET 83329	67.7	L-4 CHONDRITE	B	A	22	5-21
LEW 85317	8.7	L-4 CHONDRITE	A/B	A	25	18-22
PCA 82514	129.8	L-4 CHONDRITE	B	A	23	11-22
RKPA80216	44.3	L-4 CHONDRITE	B	B	23	20
RKPA80242	7.3	L-4 CHONDRITE	B/C	B	22	19
TIL 82404	321.6	L-4 CHONDRITE	B	B	23	20
TIL 82406	152.0	L-4 CHONDRITE	B	A	23	19
TIL 82407	220.8	L-4 CHONDRITE	B/C	A	23	20
TIL 82411	179.5	L-4 CHONDRITE	A/B	A	24	21
TYR 82700	892.1	L-4 CHONDRITE	B	A	24	15-23
ALHA81316	0.7	LL-4 CHONDRITE	B	B	29	23

@ Classified by S.G. McKinley and K. Keil.
 * Classified by S.J.B. Reed and S.O. Agrell.
 + Classified by C.B. Moore.
 % Classified by M. Rhodes and S. Haggerty.

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